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***THE POLIS, ITS COINAGE AND ITS HISTORIANS***

**By Polymnia Tsagouria**

Thesis submitted to the University College London for the degree of PhD,

July, 2005

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## ABSTRACT

This thesis sets out to explore whether the Greeks had a concept of economics and whether it is appropriate to talk about the *polis* economy. These issues are explored, first by studying Greek coinage and economic practices related to *polis* public finance and, second, by studying Greek historians' understanding of economics. In the latter case, we consider Herodotus' treatment of the economics of the Persian Wars as well as Thucydides' and Xenophon's treatment of the economics of the Peloponnesian War.

From the study of economics in Greek historiography, it is maintained that Herodotus, Thucydides and Xenophon were not only interested in economics but also understood war economics. This is due to the dominance of naval warfare especially in the last years of the Peloponnesian War, which resulted in the monetization of the *polis* economy. However, we claim that the above historians in varying degrees failed to encapsulate the ramifications of the *polis* economy and its complexity, because there is a disparity between the reality of the *polis* economy and its interpretation by the historians. Thus any reconstruction of the *polis* economy and of the rationale for economic practices based on fifth century Greek historiography is limited and insufficient. It is for this reason that we have studied Greek coinage and certain economic practices employed by the *polis* to manage public finances, finance public expenditure and deal with economic crises. From this study, we argue that the *polis* economy was a rational and independent institution operating within the *polis*.

In a nutshell, the main conclusion of this thesis is that although the understanding of economic factors was 'embedded' in the prevailing ideology of wealth and money, there was indeed a *polis* economy as an independent institution.

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## ABBREVIATIONS

- Achaem. Hist. I* = H.Sancisi-Weerdenburg (ed), *Sources, Structures and Synthesis. Proceedings of the Groningen 1983 Achaemenid History Workshop*, Leiden, 1987
- Achaem. Hist. II* = H.Sancisi-Weerdenburg, A.Kuhrt (eds), *The Greek Sources. Proceedings of the Groningen 1984 Achaemenid History Workshop*, Leiden, 1987
- Achaem. Hist. III* = A.Kuhrt, H.Sancisi-Weerdenburg (eds), *Method and Theory. Proceedings of the London 1985 Achaemenid History Workshop*, Leiden, 1988
- Achaem. Hist. IV* = H.Sancisi-Weerdenburg (ed), *Centre and Periphery. Proceedings of the Groningen 1986 Achaemenid History Workshop*, Leiden, 1990
- Achaem. Hist. V* = H.Sancisi-Weerdenburg, J.W.Drijvers (eds), *The Roots of the European Tradition. Proceedings of the Groningen 1987 Achaemenid History Workshop*, Leiden, 1990
- Achaem. Hist. VI* = H.Sancisi-Weerdenburg, A.Kuhrt (eds), *Asia Minor and Egypt: Old Structures in a New Empire. Proceeding of the Groningen 1988 Achaemenid History Workshop*, Leiden, 1991
- Achaem. Hist. VIII* = H.Sancisi-Weerdenburg, A.Kuhrt, M.C.Root (eds), *Continuity and Change. Proceedings of the Last Achaemenid History Workshop April 6-8, 1990-Ann Arbor, Michigan*, Leiden, 1994
- Achaem. Hist. IX* = M.B.Garrison, M.C.Root, *Achaemenid History IX. Persepolis Seal Studies*, Leiden, 1996
- Achaem. Hist. XI* = M.Brosius, A.Kuhrt (eds), *Studies in Persian History: Essays in Memory of D.M.Lewis*. Leiden, 1998
- Ancient Macedonia* = *Ancient Macedonia*, Greek Ministry of Culture, Athens, 1988
- Ancient Macedonia I* = B.Laourdas, Ch.Makaronas (eds), *Papers read at the First International Symposium held in Thessaloniki, 26-29 August, 1968*, Thessaloniki, 1970
- Ancient Macedonia II* = *Papers read at the Second International Symposium held in Thessaloniki, 19-24 August 1973*, Institute of Balkan Studies, Thessaloniki, 1977
- Ancient Macedonia III* = *Papers read at the Third International Symposium held in Thessaloniki, September 21-25, 1977*, Institute of Balcan Studies, Thessaloniki, 1983
- Ancient Macedonia IV* = *Papers read at the Fourth International Symposium held in Thessaloniki, September 21-25, 1983*, Institute of Balcan Studies, Thessaloniki, 1986

*Ancient Macedonia V* = *Papers read at the Fifth International Symposium held in Thessaloniki, October 10-15, 1989*, Institute of Balcan Studies, Thessaloniki, 1993

*CAH Vol. V* = D.M.Lewis, J.Boardman, J.K.Davies, M.Ostwald (eds), *The Cambridge Ancient History. The Fifth Century* (2<sup>nd</sup> ed), Cambridge, 1992

*CAH Vol. VI* = D.M.Lewis, J.Boardman, S.Hornblower, M.Ostwald (eds), *The Cambridge Ancient History. The Fourth Century* (2<sup>nd</sup> ed), Cambridge, 1994

*CHGRW* = P.Sabins et al (eds), *The Cambridge History of Greek and Roman Warfare*, Cambridge (forthcoming)

*CHI II* = I.Gershevitch (ed), *The Cambridge History of Iran Vol. II. The Median and Achaemenian Periods*, Cambridge, 1985

*Epigr.* = H.W.Pleket, *Epigraphica Vol.I. Texts on the Economic History of the Greek World*, Leiden, 1964

*Fornara* = C.W.Fornara, *Translated Documents, Archaic Times to the End of the Peloponnesian War*, Cambridge, 1983

*Harding* = P.Harding, *Translated Documents, From the End of the Peloponnesian War to the Battle of Ipsos*, Cambridge, 1985

*HCT* = A.W.Gomme, A.Andrewes, K.J.Dover, *Historical Commentry on Thucydides Vol.1-5*, Oxford, 1945-1981

*IGCH* = M.Thompson, O.Mørkholm, C.M.Kraay, *An Inventory of Greek Coin Hoards*, New York, 1973

*Kraay-Mørkholm Essays* = G. Le Rider, K.Jenkins, N.Waggoner, U.Westermark (eds), *Kraay-Mørkholm Essays. Numismatic Studies in Memory of C.M.Kraay and O.Mørkholm*, Louvain-la-Neuve, 1989

*ML* = R.Meiggs and D.Lewis, *A Selection of Greek Historical Inscriptions to the End of the Fifth Century BC* (rev. ed), Oxford, 1988

*Rhodes-Osborne* = P.J.Rhodes, R.Osborne, *Greek Historical Inscriptions 404-323 BC*, Oxford, 2003

Tod = M.N.Tod, *Greek Historical Inscriptions Vol. I* (2<sup>nd</sup> ed), Oxford, 1946

*Greek Historical Inscriptions Vol.2: 403 BC to 323 BC*, Oxford,  
1948

*Χαρακτήρ = Χαρακτήρ. Αφιέρωμα στη Μάντω Οικονομίδου*, Athens, 1996

## INTRODUCTION

Historians use numismatic evidence in order to reconstruct certain economic activities taking place in the Greek world and, simultaneously, to analyse its politics and culture. They may go on to produce works with titles such as *An Economic History of Greece*. However, did the Greek historians themselves have in their mind any idea of economics while dealing with the legendary past of the Greek world and, more systematically, with the history of the Greek city-states? In other words, did the Greek historians understand the function and the significance of economic factors in the construction of their *Historiae* and did they provide their audience and their potential readers with any concept of economics that reflects the economic practices of their own era? The question is an urgent one in view of that influential strand of modern scholarship which maintains that 'antiquity had no concept of economics'.<sup>1</sup> This thesis sets out to explore the topic of economics in Greek historiography, more specifically in Herodotus' *Historiae* of the Persian Wars, in Thucydides' *History* of the Peloponnesian War and in the two first books of Xenophon's *Hellenica* on the Peloponnesian War.

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<sup>1</sup> M.I.Finley, 'Aristotle and economic analysis' in M.I.Finley (ed), *Studies in Ancient Society* (1974) pp. 27-52, M.I.Finley, *The Ancient Economy* (updated from 2<sup>nd</sup> ed), (1999). Also, E.Will, 'Trois quarts de siècle de recherches sur l'économie grecque antique', *Annales* 9 (1954) pp. 7-22, E.Will, *Le monde grec et l'orient* (Tome I) (1972), K.Polanyi, 'Aristotle discovers the economy' in G.Dalton (ed), *Primitive, Archaic and Modern Economies* (1968), M.M.Austin and P.Vidal-Naquet, *Economic and Social History of Ancient Greece: An Introduction* (1977), E.Burke, 'The economy of Athens in the classical era. Some adjustments to the primitivist model', *TAPA* 122 (1992) pp. 199-226, I.Morris, 'The Athenian economy 20 years after the *Ancient Economy*', *CP* 89 (1994) pp. 351-366, B.D.Shaw (published), 'The early development of M.I.Finley's thought: the Heichelheim Dossier', *Athenaeum* 81 (1993) pp. 177-199, D.J.Mattingly, J.Salmon (eds), *Economies beyond Agriculture in the Classical World* (2001): Introduction, P.Cartledge, E.E.Cohen, L.Foxhall (eds), *Money, Labour and Land. Approaches to the Economies of Ancient Greece* (2002): Introduction pp. 1-7 and I.Morris 'Hard surfaces' pp. 8-43.



Whereas Finley denies that the Greeks had any concept of economy and, simultaneously, attributes to the philosophers of the *polis*, or, in his words, to the moralists of Greek society a failure to produce any economic analysis, many modern writers set out to explore either the economic practices of certain city-states or else detect a theoretical concept of economics in ancient Greek writings.<sup>2</sup> In this way, certain works have influenced the direction of my research, providing material and arguments which support the idea that it is meaningful to speak of the *polis* economy. Thus I believe that there is plenty of economics in the structure of the Greek *polis* and in the writings of its historians.

For economics in Herodotus I have mainly concentrated on the following works: I.N.Persinakis, *E ennoia tou ploutou sten Historia tou Herodotou* (1987) (*Η έννοια του πλούτου στην Ιστορία του Ηροδότου*) and L.Kurke, *Coins, Bodies, Games and Gold, the Politics of Meaning in Archaic Greece* (1999). In the first work, the role of wealth in Herodotus *Historiae* is worked out through its tragic elements and thus the scheme *Koros* (excess) - *Ate* (blindness) - *Hybris* (arrogance) is employed as an analytical pattern. Kurke in her introduction claims that she is engaged in a project of cultural archaeology. According to my reading, the writer stresses that coinage functioned as a symbolic system and, moreover, as a civic *sema* (civic token) which challenged the naturalized claim to power of the aristocratic elite. Thus the hostility of the aristocratic elite towards money is underlined. Although the above approach is fascinating, I want to attempt a different approach to be described later.

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<sup>2</sup> For example, N.S.Meikle, 'Aristotle and the political economy of the *polis*', *JHS* 99 (1979) pp. 57-73, E.E.Cohen, *Athenian Economy and Society. A Banking Perspective* (1992), S.von Reden, *Exchange in Ancient Greece* (1995), N.S.Meikle, *Aristotle's Economic Thought* (1995), W.T.Loomis, *Wages, Welfare Costs and Inflation in Classical Athens* (1998), K.Shipton, *Leasing and Lending. The Cash Economy in Fourth-century BC Athens* (2000), D.J.Mattingly, J.Salmon (eds), *Economies beyond Agriculture in the Classical World* (2001), D.M.Schaps, *The Invention of Coinage and the Monetization of Ancient Greece* (2004).

However, it is Kallet-Marx, *Money, Expense and Naval Power in Thucydides History* 1. 5. 24 (1993) and T. Figueira, *The Power of Money: Coinage and Politics in the Athenian Empire* (1998) which mostly influenced the present work in its conception. Kallet-Marx explores Thucydides' interest in finance through a close reading of Thucydides' *History*. She arrives at the conclusion that financial resources are central to Thucydides' *History* and, also, the importance of money and its relationship to the fleet and the naval empire are vital to Thucydides' perception of the historical development of the Athenian *arche*.<sup>3</sup> Figueira uses numismatic evidence and he attempts the epigraphical restoration and hence the interpretation of the Coinage Decree. He embarks on a 'revisionist' view of the Coinage Decree according to which the Coinage Decree acted to the advantage of all the citizens of the states of the Athenian alliance. Kallet-Marx's close reading of Thucydides gives the impression that Thucydides was interested in finance and moreover was fully aware of the economic mechanisms which sustained Athenian naval power and the Athenian *arche*. Also, Figueira's attempt to reconstruct Athenian monetary policy leaves his reader with the picture of a clear-cut and farsighted single monetary policy which enables the successful operation of the Athenian *arche*.

I agree with Kallet-Marx that Thucydides explores economic issues when tackling the history of the Athenian *arche* (which, undoubtedly, depends on money) and when narrating the history of the Peloponnesian War whose course was determined by money. However, I do not share Kallet-Marx's view about the extent to which Thucydides consciously perceived the economic factors that determined the course of the Peloponnesian War because, in my view, there are omissions in Thucydides'

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<sup>3</sup> A similar line of interpretation has been employed in her second book on Thucydides' understanding of economics. L. Kallet, *Money and the Corrosion of Power in Thucydides*, Berkeley, Los Angeles, California, 2001.

*History* concerning the ramifications of fifth century economic policies. Furthermore, I do not share Figueira's view that there is a single monetary policy behind the Coinage Decree because Greek coinage itself mirrors a complexity of economic practices.

Kallet-Marx's main question is 'did finance interest Thucydides?'. I ask 'did economics interest Herodotus, Thucydides and Xenophon?' Undoubtedly, the historians were aware that finances were part of the politics of the Greek city-states and of the Greek wars. But did they develop a further understanding of the *polis* economics, that is, of the rational aspects of the Greek economy and did they build their historical analysis on the basis of their understanding of economic phenomena? Or else did they 'embed' economic issues in other political and ethical practices prevailing in the fifth century Greek *polis*?

I also employ Figueira's methodological approach towards the use of the numismatic evidence. In particular, I am interested in coinage 'behaviour'. The 'reading' of the *Histories* under consideration is going to be done through the 'reading' of the Greek cities' coinage and its 'behaviour'. The idea behind such reading is that the Greek historians narrate the history of the Greek city-states and deal with economic factors. Similarly, ancient Greek coinage tells a story about the *polis* and its economic rationales and practices. Thus the evidence of Greek coinage provides a yardstick against which to measure the historians' understanding of economic mentalities and policies.

Studying Greek coinage and its 'behaviour', we have to decide how far it is political.<sup>4</sup>

It is true that ancient Greek coinage is interwoven with the political fabric of the *polis*. The *poleis* claimed their independence through their coinage and, at the same time, their coins conveyed ethnic inscriptions and demonstrated civic blazons. Some ancient Greek coins could be regarded as 'commemorative' while a sort of 'patriotic' character could be ascribed to others. But the student of ancient Greek civilisation is aware that any of its aspects is a matter of politics (*politik-on*). However, even the most 'innocent' approach to ancient Greek coinage makes it clear that the 'behaviour' of the coins furthermore provides evidence about the economy and the culture of the *polis*.

Greek coinage is a manifold phenomenon. Thus what we call coinage 'behaviour' is determined by many factors. By coinage 'behaviour' I mean the coins' provenance, their different types and their usage. Coins were issued by a particular mint. Certain authorities were responsible for coinage (the *polis*, certain moneyers, certain individuals). Silver, gold, bronze coins were issued while certain cities issued electrum ones. Greek coins were issued on many different standards and in a variety of denominations. Coins were used in various ways. Finally, coins often travelled long distances. Thus the study of Greek coinage involves a broad spectrum of historical inquiry, embracing the political and economic history of Greece and also religion and art.

Certain ideological contradictions emerge if we compare the structures of the ancient Greek *polis* and the perceptions of it by its intellectuals. What we call the Greek

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<sup>4</sup> M.I.Finley, *The Ancient Economy* pp. 166-167, H.B.Martin, *Sovereignty and Coinage in Classical Greece* (1985).

economy was built upon a variety of elements which despite contradictions functioned as economic practices. For instance, military expenses were often paid from the treasuries of the gods. Thus the 'sacred moneys' of the gods were transferred from the sphere of religion to that of the civic life of the *polis*, since they became a matter of concern of the people and were subject to their administration. At the same time, sacred property was accumulated in sanctuaries through the piety of individuals and of the state. Hence two different elements, that of religious piety and that of the war expenditure of the state, were fused together in order to produce a particular economic practice employed by the Greek *polis*. Similarly, the Greeks carried their obol for their everyday purchases, but, at the same time, they despised the use of liquid money and praised only landed property. Again, there existed a sort of contradiction in Greek attitudes towards the use of money. Also, the Greek *poleis* despised the Macedonians as 'barbarians' because, *inter alia*, the political structures of these peoples did not conform to the ideals of the *polis*. However, they were in interaction with these peoples and, they moulded their political and military activities in a close relation with these peoples' political and cultural existence. In addition, these 'barbarians' had developed, as their coinage reveals, economic practices similar to those of the Greeks. Moreover, in the course of interaction with the Greeks of Greece proper, the economy of the Macedonians came to share the same characteristics with the economy of the Greek world. In fact, contradictions characterised the perception of reality by the Greeks as well as the practices they employed to deal with reality.

Therefore, the aim of this work is to penetrate the contradictions created by the Greeks themselves to produce a picture of the Greek economy from the Persian wars

down to the end of the Peloponnesian war. Also, this project invites the Macedonians and their coinage to become part of the Greek economy despite the Greeks' contradictory views of these peoples. For the conclusion that emerges from this thesis is that dealing with any aspect of Greek society we confront a sort of contradiction between theory and practice, between intellectual perception of reality and the practical aspects of this reality. This is why we attempt to deal with the Greek economy in the classical period through two paths, that is, the Greek historians and Greek coinage. On the one hand, in the work of the historians the economic practices employed by the Greek *poleis* were fused into the perception of economics as established by Greek intellectuals of the era and as perceived by the historians themselves. Moreover, each of our historians had developed his own approach to the economics of the Greek *poleis* and the economics of war. Thus the three historians offered a varied picture of the *polis* economics and the evolution of the Greek economy. On the other hand, the coinage of the Greek *poleis* is evidence for adjustment of theory to the fiscal needs of the Greek *poleis*. Thus, the Greek economy will be studied at two levels, that is, the theoretical perception of economics and the fiscal practices of the Greek world.

As for the historians, their different approaches and the different nature of the wars they narrated provides ample material for the analysis of the pattern of the economics of the Greeks and of the barbarians, filtered through the historians' economic views. All three historians deal with great powers at war. In Herodotus it is the Persians and their empire. In Thucydides it is Athens and its *arche*. In Xenophon it is Sparta and the gradual establishment of its *arche* through the Peloponnesian War. I shall ask to what degree each of these great powers owed its power to a prosperous economy.

Also, how the powers presented by the historians at the beginning as the greatest nevertheless suffered defeat in the end. According to my historians, this happened because the ‘others’ adopted new policies and developed new practices which made them victorious at the war. I shall explore the degree to which the shift from the initial balance of power was caused by changes in the economic practices of the cities involved in the war.

To summarise, the conception of this thesis derives from disagreement with the modern consensus that ‘antiquity had no concept of economics’. The study of financial records from the Greek cities, of Greek coinage, of the works of the Greek historians and of the forensic speeches of the Athenian orators permit the assumption that the ancient Greeks were familiar with money, they counted on money, they understood its value and thus money was vital to their economic endeavour. Also, Greek cities employed sophisticated economic practices, legislated economic issues and employed particular economic measures to meet economic crises. So, their ‘political’ historians and their ‘political’ philosophers might have attempted to penetrate economic issues.

The first part of this work is a study of certain aspects of the Greek economy related mostly to public finances. In the first chapter we discuss how Athens managed its public finances in the second half of the fifth century at the time when Athens maintained its *arche* and, simultaneously, financed a long-term war, the Peloponnesian War. Also, we deal with emergency economic policies employed by the Greek *poleis* in order for economic crises to be met. The second chapter is a study of the coinage of the Greek cities and its ‘behaviour’. Greek coinage speaks of the

ramifications of the economy of the Greek *polis*. Furthermore, this work allows in the third chapter the coinage of the the Macedonians to throw light on the Greek economy not only because of the common practices shared between them and the Greeks but also because their political and cultural evolution from the Persian wars down to the reign of Philip placed them in a practical rather than theoretical way at the heart of the Greek world.

In the second part this work explores the perception of economics to be found in the historical works of Herodotus, Thucydides and Xenophon (on the basis of the first two books of the *Hellenica*). More specifically, first it deals with the historians' understanding of the economics of the Greek wars. Second, with their understanding of the economic practices that the *poleis* employed to maintain their wars and their *arche* in the Greek world. Third, to what degree they analyse economic phenomena. Fourth, whether they develop a theoretical concept of the role and the significance of economics in the structure of the *polis* and in war. Thus it will be possible to say whether the historians did consider the role of economics or whether there is an 'intellectual failure' or, in other words, a lack of sophisticated understanding of economics and, consequently, of economic analysis in the works of philosophers such as Plato and Aristotle. What the historians succeeded in doing and what they failed to do will be evaluated by the study of ancient Greek coinage and its 'behaviour'. Taken as a whole the aim of this thesis is to answer the question as to whether the economy of the *polis* is an independent institution or 'embedded' in other institutions of the *polis*. Furthermore, if we maintain that it is meaningful to talk about the economy of the Greek *polis*, did its historians understand the *polis* economics as such or did they 'embed' their understanding in other institutions of the Greek *polis*?



The approach to the Greek historians' perception of economics in this thesis will be different from other works on this topic in the following ways. First, the historians' understanding of economics will be examined on the evidence of Greek coinage and its 'behaviour'. Thus by comparing their views and the evidence of Greek coinage we will achieve a better understanding of the degree to which the historians understood economic phenomena, changes in fiscal policies and the transition to a monetized economy which Greek coinage attests. Second, the topic of the Greek economy in the fifth century will be studied in a broad spectrum, that is, in relation to the political units of the North, for they are part of the Greek world. Thus the argument on the Greek economy will not focus only on the economy of Athens which was, in many ways, a unique *polis* in terms of its political, economic and cultural development during the classical era.

## **PART ONE**

### ***The Greek polis in the fifth century BC and its economy***

## **CHAPTER ONE**

### ***Economic practices of the Greek polis in the fifth century BC***

#### **1. Introduction**

The Greek *poleis* developed certain practices to manage public finance in order to meet state expenses and to wage their wars. In this chapter we discuss how Athens managed public finance in the second half of the fifth century. Athens is a good case-study because the available sources provide ample evidence to understand how the city manages public finances whilst maintaining a naval *arche* and fighting a sequence of wars. Furthermore, Athens provides evidence for certain developments and changes in economic practices because of the gradual monetization of its public economy and of the exigencies of war. In the course of our argument economic practices employed by Athens will be also detected in other Greek cities.

#### **2. The public finances of Athens during the Peloponnesian War**

The questions we address are the following: how did Athens manage its public finances in the second half of the fifth century? How did the *polis* of Athens operate economic politics during the Peloponnesian War? Did any changes occur in the

economic practices of the city during the last years of the war? To what extent were some of the economic policies, adopted during the war, the outcome of emergencies imposed by the war?

#### **(a) Financial resources**

The treasuries of the temples in Attica were one of the financial resources of the *polis*. Moreover, the temples of Attica were the entrepôt of many of the city's revenues (e.g. imperial revenues). The treasure of the temples provided Athens with substantial finances to be used to fund military and other state expenditure in the period of the Peloponnesian War, especially when long established fiscal practices were amended or replaced by new ones. What was the wealth that several shrines in Attica held? On the evidence of the inscription *IG I<sup>3</sup> 383*, it seems that substantial capital reserve was kept in the temples of Attica. In the prescript of the inscription it is stated that the *tamiai* of the Other Gods of the year 429/8 had taken over the objects listed from the treasurers of the preceding year and had transmitted them to their successors. The list contains property attributed to about thirty individual gods. Apart from *phialae* and various vessels, coined money was part of their treasury. On Face A of the inscription Attic silver money, foreign gold or electrum coins and foreign silver coins appear (along with uncoined gold, *chryson asemon* or *psema chrysio*). The revenues of the sanctuaries were rendered in Attic money, only in a few cases in foreign gold coins. Likewise, on Face D the recorded sums of money are given in Attic drachmae (e.g., a sum of 15 T and 3,000 dr. in line 249).

In the Eleusinian treasure records (*IG I<sup>3</sup> 386*) vases, building material and cult utensils were listed along with coined and uncoined gold and silver. Also, certain sums of Attic silver drachmae, Aeginetan staters and Cyzicene gold staters were recorded. However, in the inventory of the treasurers in the Parthenon, 422/1 BC (*IG I<sup>3</sup> 351*=Fornara 141) only votives such as gold crowns and uncoined gold (l.7) were recorded. Similarly, in the inventory of the treasurers in the Hekatombedon, 418/7 BC (*IG I<sup>3</sup> 329*, ML 76=Fornara 143) and the inventory of the Pronaos, 414/3 (*IG I<sup>3</sup> 316*, Tod 78) only precious items were published while coined money owned by Athena was not recorded.<sup>5</sup>

The absence of coined money from the above inventories does not mean that the treasuries of the temples did not possess coined money. The loans of Athens from Athena's purse suggest that large sums of coined money were owned by the goddess. Thus their absence from Athena's inventories could be explained as the result of the practices of the Athenians concerning the publication of their financial documents.<sup>6</sup> Probably the Athenians were concerned to publish only the non-liquid possessions of their patron goddess, since the liquid moneys were used directly for state payments and for repayments of loans made to the state while other articles in the sacred treasury were considered to be the iron reserve (Thuc. II 13.4). On the evidence of these *traditiones* it becomes clear that the fortune possessed by the gods had been increased over time. For example, in the inventory of the Hekatompedon, 418/7 BC new items were recorded which did not appear in the Hekatompedon in 434 BC.

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<sup>5</sup> In the fourth century the inventories of the Attic temples contained only objects, e.g. the inventories of Artemis Brauronia for a period from 350/49 down to 334/3 BC (*IG II<sup>2</sup> 1514-1531*). See Woodward (1963) pp. 144-186. On the contrary, in the Delian temple accounts, especially in the third and second centuries BC, the assets of the sanctuary were recorded in coins, only occasionally property in kind was recorded. See Linders (1992) pp. 69-73.

<sup>6</sup> See Samons II (2000). Appendix 3.

Many items were listed in a sequence of inventories because they were not removed from the sanctuary and were not melted down in the course of time. For example, in the inscription of the treasurers of the Goddess in 385/4 (*IG II<sup>2</sup> 1407*) the items listed were those recorded in the Hekatompedon and in the Opisthodomos lists.<sup>7</sup> The above epigraphical material gives evidence that the treasuries of the gods of Athens owned substantial assets.

The income of the sanctuaries of Attica derived from dedications of individuals and probably from certain collective offerings as was the case with the Panhellenic sanctuaries of Delos, Delphi and Olympia.<sup>8</sup> Moreover, certain economic activities increased the revenues of the shrines. For example, 'tithe from sold slaves' belonging to Artemis Agrotera was contributed to the shrine's revenue (*IG I<sup>3</sup> 383*). The *dekate*, that is, the tithe of war's booty was accustomed to the gods.<sup>9</sup> Similarly, the *dekate* of the amount paid for ransoming war prisoners was dedicated to the sanctuaries of the gods. The *dekate* of certain fines imposed to individuals and of confiscated property

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<sup>7</sup> The list was compiled by the treasurers of Athena at the time when the board of the treasurers of the Other Gods became again a separate body, independent of the treasurers of Athena. See Woodward (1946) pp. 377-407. Some items belonging to the sacred treasuries were listed in a sequence of inventories but their value was considerably reduced. A good example is the gold crown on the Nike of the chryselephantine statue of Athena. First, it appears in the inventory of 428/7 (*IG I<sup>3</sup> 323*, l. 52) and it was present in inventories down to the last inventories of the treasurers of Athena (*IG II<sup>2</sup> 1487*(307/6 BC), 1491 (305/4 BC), 1477 (304/3 BC). However, in the fifth century its weight was about 50 or 60 dr. (e.g. in the inventory of treasurers in the Hekatompedon of 418/7 BC (ML 76) was 60 dr.) but in the fourth century the remaining four petals weighed 6 dr. 2 obols. See Lewis (1988) pp. 297-308.

<sup>8</sup> An early instance of dedications to a Greek sanctuary is Croesus' gifts to the temple of Artemis at Ephesus in 550 BC (Fornara 28). Nevertheless such large dedications as those of Croesus to Panhellenic precincts were not the rule. Dedications of individuals were often of small size. A good example comes from the inventories of the Athenian Asclepieion from which some about 1,377 dedications are preserved. Aleshire's calculations (1990) p. 90 concluded that dedications under 1 dr. made the 32.3% of the total dedications, between 1 and 2 dr. the 12.9%, between 2 and 4 dr. the 17% and above 4dr. the 37%, namely the 62.2% were under 4 dr.. Some of the dedications were in silver coins which did not surpass 500 dr. (p. 93). The above figures came from inventories of the third century but, I think, they represent the general characteristics of dedications to sanctuaries. Undoubtedly, the resources of the Greek sanctuaries or, more specifically, of the Attic, were not the same but they depended on cult activities held at each sanctuary and on the social status of the dedicants they attracted.

<sup>9</sup> For example, the booty from the Persian wars (Hdt VIII 121, IX 70, 81, Thuc. I 96.1). Agesilaus offered to the god in Delphi the tithe of his booty which was not less than 100 T (Xen. *Hell.* IV 3.21).

was paid to the gods.<sup>10</sup> Furthermore, Athena, the chief goddess of Athens, received a particular income, namely the 1/60 of the tribute paid by each city tributary to Athens (*aparchai*). The gods also profited from a sort of landing-tax paid to them by shipowners and merchants. For instance, a decree of 432/1 (*SEG XXI* 37) deals with the collection of the drachma contributed to Apollo at Phaleron by each of the *naukleroi* mooring there.<sup>11</sup>

Advanced economic policies secured the revenues of the shrines. According to the Athenian decree regulating the offering of first-fruits at Eleusis, *ca.* 422 BC (ML 73), the share of the wheat and the barley brought by the Athenians and by the allies to the two goddesses should be sold (l. 41) and thus the money should be used for the needs of sacrifices and votive offerings. In the period of the Athenian *arche* we can assume that the Attic gods receive some revenues from land they owed outside Attica. There is epigraphical evidence for sacred enclosures (*temene*) of Athenian gods in allied territory. For example, there had been found in Samos boundary-stones, *horoi*, of the *temene* of Athena, Ἀθηνῶν μεδέουσα, and of the Eponymoi and of Ion (*SEG II* 375).<sup>12</sup>

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<sup>10</sup> The deposit of the tithe and other amounts with Athena was a formulaic provision in many Athenian decrees. For example, a provision in the decree for the reassessment of the tribute of the Athenian empire in 425/4 BC (ML 69=Fornara 136, l. 34) was that 'if anyone else proposes a motion that the cities shall not be assessed ...his property shall be confiscated, the goddess receiving the tithe'. Also, the Athenian decree which orders the building and manning of ships and honours Archelaus of Macedon, 407/6 BC (ML 91=Fornara 161) included the provision that 'if anyone does not act in accordance with this, he shall be liable to pay (1,000 or 10,000) drachmae, dedicated to Athena' (ll. 20-1). The law prohibiting the digging up of olive trees in Attica in the fourth century (Dem. *Against Makaratos* (43, 71) fixed the payment of 100 dr. for each olive tree supplied to the treasury (*demosion*) and the tithe was allocated to the goddess.

<sup>11</sup> Parker (1996) p. 125. Also, at Sounion (*IG I3* 8), in the Piraeus (*IG I3* 133).

<sup>12</sup> On the evidence of these *horoi*, it is commonly believed that a tithe of the land seized by the Athenians in 439 BC was assigned for the three Athenian cults while the remainder is occupied by cleruchs from Athens. Barron (1964) p. 45 argued that 'the *temene* at Samos cannot have been concentrated by the Athenians in 439 BC, for the *Eponymoi* are the *Eponymoi* of Samos and of the Ionians, not those of Athens'. The Athenians confiscated land in Euboea (*IG I<sup>2</sup>* 376).

One of the main sources of temple revenues was the leasing out of land. The practice of renting out sacred or common land was well established in Greek cities. In the Athenian inscription *IG I<sup>3</sup> 84*, 418/7 BC land belonging to Neleus, Kodros and Basile was leased out and thus certain income of the sanctuaries came from rent for leased sacred land. There exists evidence from the fourth century of properties leased on behalf of Athena Polias and other deities in Attica.<sup>13</sup> For example, in Demosthenes (57.63-4) rents from the lease of sacred precincts (*temene*) are attested. In the accounts-inventories from Eleusis in 408/3 BC (*IG I<sup>3</sup> 386-387*, l. 147) we find the considerable amount of 500 dr. as rent from land on Cythnus belonging to the Eleusinian goddesses.<sup>14</sup> Leasing of sanctuaries is also attested in Euboea from a period around 424 BC (*IG I<sup>3</sup> 418*).

The practice of leasing sacred property is well documented in the accounts of the Delian temples (*hiera syngraphe*). Rentals from estates that were leased by the Temple of Apollo were the earliest of the various sources of the temple revenues. Temple estates on Delos, Rheneia and (later) on Mykonos were rented out from an early period in the sixth century down to the Amphictionic period and then to the period of independence.<sup>15</sup> The temple estates on Delos were leased for ten years. At the end of this period the estate was auctioned off. If the tenant paid rent at 110% of the level of the rent of the previous period, he could remain the lessee of the estate.<sup>16</sup> The accounts of the Delian Temples, 434-2 BC (ML 62=Fornara 121) give evidence

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<sup>13</sup> Walbank (1983) pp. 100-35.

<sup>14</sup> See Cavanaugh (1996) p. 190.

<sup>15</sup> During the Amphictionic period 10 estates on Rheneia and 5 estates on Delos were leased. The total rental from these estates was around 7,000 dr. The regulations concerning leases of sacred estates exhibit conformity from the Amphictionic period down to the period of independence. See Kent (1948) pp. 243-338.

<sup>16</sup> The tenant was responsible for the upkeep of the buildings and of the vines and other trees. The tenants of the temple property both in Athens and on Delos were rich, people of high status. See Osborne (1988) pp. 255-270.

of leasing of sacred land for ten years on Delos (ll. 15-20) and on Rheneia (ll. 20-4). The figure of 1 T and 1,110 dr. as for annual rent from sacred property in Rheneia is large if we take into account that the tribute paid annually by Rheneia was 300 dr. By the fiscal process of leasing out property belonging to the temples the treasurers of the temples realised money in cash.<sup>17</sup> Therefore the treasures of the sanctuaries consisted of liquid money. Such practices contributed towards the monetization of the economy of the Greek *polis*.

From the above discussion we can draw the following conclusions. Firstly, the Athenian temples, like all Greek temples, had substantial revenues out of which they met their own financial needs such as the maintenance of the shrine, building works and sacrifices. Secondly, the sanctuaries operated as the state treasuries. Thirdly, miscellaneous economic practices determined the economics of the temples, which were cognate to those employed by individuals and by the *polis* itself. We can now go further and ask how the sacred property was used to finance the *polis* expenditure. In other words, did the *poleis* rely on the revenues of sanctuaries in order to finance the enormous expenditure incurred during the Peloponnesian War?

It is clear from our sources that sanctuaries lend out money at interest. In the inscription of the accounts of the temple of Nemesis in Rhamnous, 450-40 BC (ML 53=Fornara 90) loans from the monies of Nemesis are recorded.<sup>18</sup> In the accounts of the Delian Temples, 434-432 BC (ML 62=Fornara 121) loans of 9 T and 20 dr. made

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<sup>17</sup> There are instances of rent in kind, which belong to pre-monetary practices. This was in contrast with the established practice in the fifth century of paying rent in cash. For instance, Argos attacked Epidaurios (Thuc. V 53-5) because the Epidaurians did not give the animals to Apollo Peithios as rent, for they used land belonging to the temple for pasture.

<sup>18</sup> The grand total of the loans was 56,606 dr. (l. 34). The loans were made to individuals and were in standard sums of 200 and 300 dr. (ll. 7-8, 29).



at ten percent interest are recorded.<sup>19</sup> Thus, on the above evidence, sacred money (*hiera chremata*) was lent out to individuals.<sup>20</sup> If the practice of borrowing sacred money was well established in the mentality of the Greeks, then it seems reasonable to say that this practice was similarly employed by the *polis* itself in order to meet its fiscal needs. In such a case the monies of the gods, that is, the *hiera chremata* would be used for payment of public expenses and hence it would function as *hosia chremata*.<sup>21</sup>

### **(b) The Financial Decrees of Callias**

The Financial Decrees of Callias, 434/3 BC (*IG I<sup>3</sup> 52 A*, ML 58=Formara 119) provide evidence about Athens' public finance during the Peloponnesian War. The content of the decree A is the following. The Athenians decided to repay the money due to the Other Gods (II.1-3). Three thousand Talents in Athenian coinage were brought to Athena's treasury (II.3-4). The funds from which the debts were to be paid were the money from the *Hellenotamiai* and the money derived from the 10% tax (*dekate*) (II.

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<sup>19</sup> A later inscription dated to the second half of the fourth century BC deals with loans from sacred money (*IG II<sup>2</sup> 1983*). The main provisions were that the demesmen of Myrrhinous instructed the priests 'to make any necessary loans, on guarantee of land or house or tenement, and to place *horoi* on the property to indicate to which deity the loaned money belonged' (II. 27-32). The decree gives authority to the priest to stipulate the loans. Though it is a fourth century inscription, it gives evidence of loans made by sanctuaries. The procedure of borrowing from gods as it is attested in fifth century Athens had been developed over a long period of time.

<sup>20</sup> The money which was not *hiera chremata*, that is, it did not come from the gods treasures, was *hosia chremata*. In the records of the Delian treasuries there is a distinction between *hiera kivotos* and *demosia kivotos*. The word *kivotos* was also used for the treasury of individuals kept at their house (e.g. *Lys.* 12.10).

<sup>21</sup> The issue of the function of the *hiera chremata* as *hosia* has extensively been debated in relation with Greek religion and the impiety of the Greeks. Our argument concerns the economic rather than the religious aspects of the topic. However, religion was embedded in every single aspect of the conduct of individuals and states throughout antiquity. Gods and religion stood for the ancient Greeks, mainly, as their assistants. Thus their duties to the gods were defined in a less rigorous way than that of the Christians. Certainly, their religious language offered such words as *anosios*, *bebelos* and *asebes*. In fact, the Greeks showed notable mastery to reconcile their duties to the gods with their civic life. In this sense, it is not necessary to keep a distinctive line between 'sacred' and 'secular' when dealing with the Greeks. See Parker (1983), Connor (1988) pp. 161-188.

6-8). A board of treasurers of the Other Gods appointed by lot in the way Athena's treasurers were appointed was constituted (ll. 13-5). The treasurers of the Other Gods were to administer the funds of the gods in the Opisthodomos on the Acropolis (ll. 15-18). The treasurers were to record all the money they had received on a stele, entering separately the sums belonging to each god and the total amount and separating gold from silver. In future they would inscribe annually a stele and give account of balances and receipts and annual expenses to the *logistai* and pass *euthyna* (ll. 22-7). After the debts to the gods have been repaid, the surplus was to be used for the dockyard and the walls (ll. 30-2).

The provisions of the Callias decrees are crucial for any reconstruction of the Athenian economy in the second half of the fifth century. There is an enormous literature concerning the decrees. The bulk of the discussion has been focused on the date of the decrees and the relation between the two decrees. For the present argument it has been accepted, first, that the so-called 'orthodox' date of 434/3 BC is correct and that it fits best the Athenian economic situation and structures on the eve of the Peloponnesian War.<sup>22</sup> Second, there is an interrelation between the two decrees. Thus it seems plausible that both decrees were resolved, even not at the same day at two different meetings of the assembly, at least, in a span of a few days.<sup>23</sup> Our argument concerning the function of the decree in the Athenian economy will focus on the following topics.

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<sup>22</sup> The 'orthodox' date of 434/3 BC has been vigorously challenged by scholars and thus the years 425/4, 422/1 and 418/7 BC have been proposed as dates for the decree. Fornara (1970) pp. 185-96 argued for 418 BC. Kallet-Marx (1989) pp. 94-113 argues that 'the decree A should be considered on its own on the issue of both date and content and not in conjunction with decree B'. According to her argument, decree B cannot be passed earlier than 430-29 BC. Mattingly (1996) pp. 239-246 dated the Callias decrees in 422/1 BC. More recently, Samons II (2000) pp. 228-229 has placed Callias A just before the Peloponnesian War and decree B in the period around the peace of Callias.

<sup>23</sup> It has been maintained that both decrees were inscribed by the same mason. Bradeen (1971) pp. 469-470. Cawkwell (1997) Appendix I p. 107 gives a parallel of two decrees presented to the people at the same day (Athenian relations with Chalcis, 446/5 (ML 52)).

First, the 'orthodox' date for the financial decrees of Callias fits a reasonable concept of economic decisions made by the Athenians. For, as early as 434/3 BC, the Athenians thought that a war was coming. This becomes clear from Thucydides (I 44.2) who stated that the Athenians' alliance with Corcyra was concluded since the war with the Peloponnesians seemed to be imminent. If the fear of the coming war had determined the relevant political decisions of the Athenians, namely the alliance with Corcyra, this very reason would have determined their economic decisions. The Athenians had earlier (probably in 440/9 BC) decided in connection with the construction of the Propylaia and the Parthenon (Strasbourg Papyrus), to transfer 3,000 T to the Acropolis. Their financial settlement then envisaged a period of 15 years.<sup>24</sup> At the time of completion of the major works on the Acropolis, new economic arrangements were required which were resolved by Callias. If the works at the Parthenon were on a minor scale now as the decree B indicates, then repayments to the gods were allowed. The repayment of loans made from the main treasury of Athens, that is, of Athena, had already been resolved by a previous decree. Finally, the administration of the treasures of Athena by a board of treasurers provided the Athenians with a good example of convenient management of the sacred money. Henceforth a board of the treasurers of the Other Gods would make the repayment of the loans to the Attic gods convenient in terms of administration. The more likely time for such a decision was the year 434/3 when the war with the Peloponnesians was thought to be imminent, the financial arrangements in respect of the major works on the Acropolis had expired and minor constructions were to be financed by the gods' purse.

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<sup>24</sup> *ATL* III p. 320.

Second, presuming that there is an interrelation between decree A and B, we would emphasize the Athenians' decision at the time before the outbreak of the great war to sort out their economy. Both decrees reflect the attempt of the Athenians to employ sophisticated economic practices in order to exploit to the maximum the influx of large assets at the time when Athens was at the peak of its political and economic strength. In addition, the same economic thinking characterizes the two decrees: both are appropriate to a situation in which a future war is envisaged rather to an emergency situation created by a war.

Third, the decree stipulates that the treasures of the Attic gods shall be kept on the Acropolis for the time being. On this provision two points could be made. Some of the treasures of Attic temples were located on the Acropolis from a period earlier than the decree. In an Eleusinian inscription dated to *ca.* 460 BC (*IG I<sup>3</sup> 6*) we find that the proceeds of the *aparche* paid to the Eleusinian goddesses were placed on the Acropolis (*em polei* l. 37). Thus the provision of the Decree A reflected an already existing practice which had now been decreed by the Athenian Boule and the Demos and which applied to every single Attic sanctuary. The sanctuary of the goddesses at Eleusis, undoubtedly, had abundant resources because of the Eleusinean Mysteries and it seems therefore possible that part of its funds had been deposited for safekeeping on the Acropolis. With the decree of Callias this practice might have been employed for many other temples which did not possess the treasures of the Eleusinian sanctuary. However, according to the decree, the Treasurers of the Other Gods would administer the gods' funds on the Acropolis as the Treasurers of Athena did. Such a requirement did not rule out the assumption that local treasurers (or

officials) of the temples were in charge of some parts of the liquid and non-liquid property of the gods.

There is evidence that the property of some gods were scattered in different locations where the rituals took place. Again, a good example comes from the Eleusinian accounts from 408/7 BC (*IG I<sup>3</sup> 386-387*). The money and the precious objects owned by Demeter and the Kore were located in three different places, that is, on the Acropolis in the Opisthodomos, in the City Eleusinion (*en astei*) and at Eleusis itself. On the above evidence it appears that with the enactment of the Callias Decree the treasures of the Other Gods were concentrated on the Acropolis but only partially. The board of the treasurers of the Other Gods were in charge only of the administration of the sacred funds preserved in the Opisthodomos. This assumption is confirmed by the development of the administrative organisation of the Athenian sanctuaries. The study of the epigraphical evidence from Eleusis confirms that the role of the *hieropoioi* in the administration and financial maintenance of the Eleusinian sanctuary was assumed by the *epistatai* who by the end of the fifth century had complete control of the funds of the goddesses (the offerings of the first-fruits at Eleusis (ML 73) and the accounts of Eleusis from 408/7 (*IG I<sup>3</sup> 387-386*)).<sup>25</sup>

Fourth, it has been pointed out that the Callias Decree represents an attempt at the centralisation of Athens' finances. This was a good way of ensuring the safety of the gods' treasures on the Acropolis. Furthermore, the concentration of the funds of the gods in the Opisthodomos would facilitate their use by the state. At that time, imperial Athens had already developed adept management of its financial resources and thus

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<sup>25</sup> See Cavanaugh (1996) pp. 76-77. Clinton (1979) pp. 1-12.

the centralisation of its treasuries was highly desirable. However, the centralization of the state finances envisaged by the Callias Decree was achieved only partially. This is because total centralisation would be contrary to the structure of Athenian society itself. During the fifth century, despite the concentration of political life in the *asty*, the demes of Attica maintained their own political and cultural life. The demes were organised around their gods and their cults and thus the treasures of their sanctuaries were vital to the demes as political and religious units of the city of Athens.

The following question therefore arises: were the sanctuaries of Attica deprived of their treasures by the time of the constitution of the board of the treasurers of the Other Gods and during the Peloponnesian War? To put that another way, did the centralisation of the revenues of the city (though partial, according to the above argument) affect the economics of the Attic sanctuaries? A negative answer seems plausible for the following reasons.

Firstly, in the inscription recording the loans from the sacred treasuries as well as in the inventory of the Other Gods in 428 BC (*IG I*<sup>2</sup> 310) some of the Attic gods were not listed. This indicates that their treasures were not transferred to the board of the treasurers of the Other Gods and thus were not brought to the Opisthodomos on the Acropolis but were managed independently by the cult personnel such as priests, *epistatai* and *hieropoioi*, while certain treasurers were not excluded.<sup>26</sup> In addition, the records of the Eleusinian Epistatai for the year 408/7 (*IG I*<sup>3</sup> 386-387) confirm that the *epistatai* were in charge of the finances of the sanctuary of Demeter and Kore at Eleusis (l. 2).

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<sup>26</sup> A large number of officials were involved in managing of temples and in worship: Ar. *Polit.* 1322b 18-29.

Secondly, the loans to Athens from the sacred money of the sanctuaries are not evidence that the entire property owned by the gods had been taken out of the shrines and had been physically removed to the Acropolis in the Opisthodomos. Many of the possessions of the sanctuaries had remained at their deme location and were managed by the local temple authorities. Many of the votive offerings, immobile and cult utensils and equipment did not find their way to the Opisthodomos. Consequently, we can assume that a substantial part of the assets of the Other Gods, which were not liquid wealth, remained in their physical location. However, there exists evidence that Attic sanctuaries administered and invested liquid money independently from the board of the treasurers of the Other Gods in a period after the decree of Callias. An example comes from Eleusis (*IG I<sup>3</sup> 386-387*, 408/7 BC). The Eleusinian sanctuary grants a loan of some 20,000 drachmas of silver to the treasurers of Athena with gold deposited as surety (ll. 173-83).

Thirdly, the Athenians celebrated many festivals, not only the state festivals such as the Panathenea and the Great Dionysia but numerous other festivals celebrated in Attic demes at local sanctuaries.<sup>27</sup> Taking into account the notable cult activity in rural Attica we can assume that the gradual concentration of the population in the city's walls and the Peloponnesian invasions of Attica during the Peloponnesian War did not entirely prevent the Athenians from performing their rituals and to celebrate their festivals. A document from the small deme of Plotheia (*IG I<sup>3</sup> 258*) dated between 425 and 413 BC strengthens this argument.<sup>28</sup> The inscription is important evidence for

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<sup>27</sup> According to the *Old Oligarch* (3.2.8), 'the Athenians celebrated more festivals than any other city' (also, Thuc. II 38). The preserved sacred calendars (*fasti*) dating to the fourth century provide evidence for great cult activity in the Attic demes. For instance, in the calendar of Erchia 43 individual deities and heroes were specified as receiving sacrifices. See Dow (1965) pp. 180-213, Whitehead (1986) pp. 185-208.

<sup>28</sup> See Whitehead (1986) pp. 165-169.

the economy of the Attic demes. For the present argument, we note the following provisions. First, 'the income from both loan interest and leases is to finance the sacrifices at festivals for the Plotheians, for the Athenians on the Plotheians behalf, and for the quadrennial festivals' (ll. 22-28). Second, 'other festivals which have hitherto been financed from sums paid by all Plotheians individually, are to be financed from common funds by the official in charge of the 'immunity money' (*ateleian*) (ll. 28-33). If the date of this financial document of the Plotheians is correct, then there was cult activity in Attica during the war. Thus the shrines in rural Attica were not abandoned during the war.<sup>29</sup> The temples needed income to meet their cult expenses and therefore the temples themselves had the control of a considerable part of their property. The above argument leads to the conclusion that the centralisation of the Athenian resources was only partial.

As for the main provision which has often been considered as the purpose for the enactment of the Callias Decree, that is, the repayment of loans made by the Athenian state from Attic sanctuaries the following questions arise.<sup>30</sup> First, when the loans were made. Second, what purpose such loans were made for.

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<sup>29</sup> Aristophanes *Peace* shows that certain cults were performed in Attica during the war (ll. 415-22, 455-7). The farmer Trygaeus was engaged in sacrifices in rural Attica (ll. 922-1022). In Xenophon *Hellenica* (I 4.20) there is a reference to the Eleusinian Mysteries. Certainly, the war affected many aspects of the civic behaviour of the Greeks but it does not seem likely that in the long period of the war the Greeks relinquished their cults and festivals, which were the gist of their political life.

<sup>30</sup> As for the interpretation of repayments to the Other Gods as repayment to loans made by the Athenians from the gods Kallet-Marx (1989) offered a different interpretation. According to her, 'Decree A may be not at all concerned with repayment of borrowed funds but rather with the resumption of repayments of owed money'. Her argument focuses on the meaning of the word '*ofeilo*'. In both decrees the wording is '*ta ofeilomena tois theois*' (A l. 8, B. ll. 20-1). In such a case, the Logistai inscription which was used for the documentation of the 'orthodox' date for the Callias decrees gives no support, since each decree 'would deal with an entirely different kind of financial transaction'. I do not think that the meaning of the verb *ofeilo* supports such an argument. For instance, the Athenian decree of 410/9 BC (*IG* I<sup>3</sup> 99) is concerned with repayments to Athena. The linguistic formula is *ton ofeilomenon chrematon* (l. 9). It is likely that the repayments concern loans drawn from the goddess' treasury, since the accounts of the treasurers of Athena of the previous years show that the state had heavily borrowed from Athena.



The first question is related to the date and the reason for the enactment of the decree. We argued earlier in this chapter for the date 434/3 BC for the enactment of the decree. Thus the loans were made in some earlier period. There is no need to suppose that the loans were made because Athens envisaged financial deficiency, since sanctuaries work as 'banks' for the Greek cities in peacetime as well as in wartime. On the basis of the amount of 200 T allocated for the repayment of the gods' loans (B, l. 23) and of the Logistai Accounts, where loans from the Other Gods of 821 T for eleven years were recorded, we can assume that the loans indicated in the decree A were made over a period of several years. The treasures of the Other Gods therefore functioned as one of Athens' treasuries from a period before the Peloponnesian War. The economic situation created by the great expenses of the war resulted in the development of previous practices and, not necessarily, into new economic measures.

Now for the purpose of the loans. The Samian war in 440-39 BC required heavy expenditure. From the inscription concerning the expenses of the Samian War (ML 55=Fornara 113) it appears that the treasury of Athena funded that war (a total of 1,400 T appears in l. 19). The loans would have been made for the construction of the Parthenon which begun in 448/7. However, it seems that the building of the Parthenon was rather funded by other sources than by moneys from the temples of Attica. On the evidence of the 'Strasbourg Papyrus' (Anonymous Argentinensis, dated to 450/49 or to 431/0, Fornara 94) the construction of the Parthenon and of the Propylaia was funded by the tribute of the Delian League (ll. 5-9). In the text we concluded that the sum of 5,000 T derived from the tribute payment according to Aristides' assessment. This money was reserved in the public treasury (*demosion*). A sum of 3,000 T was carried up to the Acropolis and this amount of money funded the building works (ll.

9-10). In the Building Accounts of the Propylaia, 434/3 (ML 60=Fornara 118) the resources for the work come from Athena's treasury, the treasury of the *Hellenotamiai*, more specifically, from the quota paid to the goddess from the allied tribute, from the treasury of a mine in Laureion and from a sum handed over by the *hellenotamiai* to certain generals which probably remained unspent.<sup>31</sup> Hence, on the above evidence, the hypothesis that the loans from the Other Gods financed the greatest expenditure of the city in the years before 434 BC seems unlikely.

A better picture of the treasuries of the Other Gods and their role in the state finances comes from the inscription concerning loans to the Athenian state from sacred treasuries for the period from 426/5 to 423/2 BC (ML 72=134). Two loans from the Other Gods were made in 423/2 BC amounting to 54 T and 5,988 dr. and up to 2 T and 2,000 dr. for the interest (ll. 54-97). For the quadrennium 426/5 to 423/2 BC the loans from the Other Gods reached the amount of 766 T and 1,099 dr. and the interest due was 37 T and 2,338 dr. (ll. 102-5) and the total for eleven years was 821 T and 1,087 dr. (ll. 119-20), a relatively small amount in comparison with that of 4,748 T loan at the total interest of 1,243 T and 3,804 dr. from the purse of Athena Polias. From this inscription it becomes clear that the Treasurers of the Other Gods had responsibility for these moneys. What purpose the money was loaned for was not specified in the *Logistai* accounts (a certain sum was given to the generals Demosthenes and Nicias but it was from Athena's treasury).

From the above discussion in regard to the Callias financial decrees we reach the following conclusions. The treasures of the Athenian gods were financial resources

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<sup>31</sup> The total amount of money spent on the construction of the Propylaia was 2,012 T (*Harpocration* s.v. Propylaia, Heliodoros *FGrH* 373 fr. 1: 2,000 T).

for Athens before and during the Peloponnesian War. Even if the above discussed epigraphical evidence does not give a detailed picture of the state expenditure paid by the gods' money, it is still reasonable to argue that the treasures of the Other Gods were one of Athens' treasuries.

The board of the treasurers of the Other Gods instituted by the first decree moved by Callias reflects a sophisticated fiscal policy of the Athenian state and its evident determination to make the most of the money accumulated in the shrines of Attica and to develop the established practice of loans from sacred money, which previously worked to the advantage of individuals (this probably was the case with the loans made by the treasurers of Nemesis at Rhamnus (ML 53)), and hence the state would financially benefited.<sup>32</sup> Such a fiscal policy has often been interpreted as a move towards a sort of centralisation of Athens' economy. We argued that such a centralisation was only partial, since the Attic sanctuaries maintained part of their property to finance their cults. In my view, what prevailed in the financial machinery of Athens was rather an attempt to use simultaneously all its treasuries, that is, Athena's treasury, the treasury of the Other Gods, the public (*demosion*) and the imperial treasury and to manage its public finances than an attempt to centralise its resources completely. Moreover, in this way, the one treasury could benefit all the others. In some cases, in the accounts of Athenian finances the resources of each treasury were not clearly defined.

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<sup>32</sup> Maintaining the view that the fiscal policies resolved by the Callias decrees made the money of the Attic shrines available to the state for financing its expenses, we maintain at the same time, that it was an attempt at a secularisation of sacred money. In my view, as I said before, there is no such issue concerning the use of sacred money by the Greek *poleis*. See Linders (1975) pp. 17-18, 53-57.

If we accept the early date of 434/3 for the constitution of the board of the treasurers of the Other Gods, then it was not a measure required by the emergencies of the Peloponnesian War. Rather it was a fiscal measure which was taken for the better operation of the economy of Athens at the time that war with the Peloponnesians was thought to be imminent. Nevertheless it helped to fund the war machinery of Athens during the Peloponnesian War.

### **(c) The treasuries of Athens**

Now we shall discuss the other treasuries of Athens and how they funded the state expenditure during the Peloponnesian War. We shall focus on certain changes in the procedure of funding public expenditure during the period of the Peloponnesian War. We ask the question whether changes in the economic practices of the Athenians were brought about by the war and its exigencies.

We begin with the treasury of Athena. The second Callias decree gives a piece of information about Athena's treasures and their use by the state. The main provisions in the Decree B are the following. There is a reference to some work on the Acropolis at a cost of 10 T (ll. 3-12). No sum above 10,000 dr. may be drawn from Athena's reserve without a special sanction (ll. 12-19). The *hellenotamiai* are to deposit the moneys due to the Other Gods; later in the year they will be handed over to the treasurers of the Other Gods. When these debts have been repaid from the 200 T voted by the people, Athena's treasury is to be on the right of Opisthodomos and that of the Other Gods on the left (ll. 19-25). The treasurers of Athena are to complete the

weighing and counting of Athena's treasure (ll. 26-9)<sup>33</sup>. The sums of money from Athena's treasury that the decree deals with are relatively small in comparison with the big amounts of money loaned by Athena to the state in a span of time from 433/2 down to 407/6 BC.

We have already mentioned the *Logistai* inscription (ML 72=Fornara 134). The loans made to Athens by sacred treasuries in order to meet public expenditure in the quadrennium 426/5 to 423/2 were recorded and the totals for 11 years from 433/2 to 423/2 BC were set out. Certain amounts of money were paid out by the Treasurers of Athena to the *hellenotamiai*. The loans were made to Athena Polias, Athena Nike and the Other Gods. The grand total was 5,599 T and 4,900 dr. (ll. 122-3). Athens borrowed heavily from the treasury of Athena Polias since 4,777 T and 3,323 1/6 dr. were drawn from her treasury. The total loans from Athena Polias in the quadrennium 426/5-423/2 BC were relatively lower than those of the previous years. A sum of 100 T was drawn from Athena every spring during the quadrennium (ll. 12, 22, 33, 44).<sup>34</sup> The interest reckoned was around 1 1/5 per cent. In a few cases the purpose of the loan was indicated.

The records of payments from Athena's treasury for public purposes in 418-14 BC (ML 77=Fornara 144) give evidence for money drawn from Athena's purse in order

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<sup>33</sup> The weighing and counting of Athena's treasure might have been related to the proceedings of publishing inventories such as the inventory of the Parthenon (*IG I*<sup>2</sup> 351), of the Hekatompedon (ML 76) and in a later period of the Chalcothece (*IG II*<sup>2</sup> 120, 353/2 BC). The verbs 'weigh' and 'count' were rather referring to objects and uncoined gold and silver than to coinage, since the inventories of Athena do not include coined money. See Samons II (2000) pp. 216-229.

<sup>34</sup> What was the purpose of the regular payment of 100 T from Athena? Gomme (*HCT* 2. p. 433 ff.) argued that the Athenians spent all their income and only borrowed from the gods the amount necessary to make up the deficit. Meiggs-Lewis maintained the view that Athena regularly made a token 100 T contribution to the war at the beginning of the campaigning season pp. 216-217.

for military operations to be financed. Such high expenditure was allowed by a vote of immunity (ll. 16, 31, 34, 64), probably in accordance with the Callias Decree B.

Under the oligarchy of 411 BC expenditure from the sacred monies of Athena was recorded (ML 81=Fornara 150). The sums of money which were transferred from Athena to the *hellenotamiai* were not large.

In the year 410/9 payments were made by the treasurers of Athena (ML 84=Fornara 154). Payments were made from the annual income of Athena (*ek ton epeteion* l. 3). Probably the goddess' reserve was depleted. The published amounts of money were individually small (5 T and 4,656 dr. is the highest figure, l. 41). On the evidence of this document the total of the money spent from Athena's purse was some 180 T. The payments were designated for various purposes such as for provisions of grain for horses (for the cavalry), for the *athlothetai* for the Great Panathenaia, for the *diobelias*,<sup>35</sup> for provisions to generals. Three cases of payments represented book transactions. The vouchers for a payment made by a general in Eretria (l. 17) and of two payments made at Samos (ll. 20, 35) recorded in the inscription represented credits for payments received and expended in the field. Since in theory it was money due to the goddess, it was recorded in the accounts of Athena's treasurers.<sup>36</sup>

From the *rationes* of the year 409/8 (IG I<sup>3</sup> 376) it appears that payments were made from the annual income (*epeteia*: ll. 4, 8-9, 15, 24) and from funds received from the

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<sup>35</sup> Literally *diobelias* means a two-obol payment: Ar. *Ath. Polit.* 28.3, *Polit.* 1267 b. The purpose of this payment is obscure. It has been considered to be similar to the theoric fund, as jury pay, as assembly pay and as relief payment for those who financially suffered from the Peloponnesian War. The modern consensus is in favour of the view that it was a fund for war relief and poverty. ML p. 260, Pritchett (1977) pp. 41-44.

<sup>36</sup> See Samons II (2000) pp. 269-272). He concludes that 'the Athenians collected and expended certain moneys in the field, yet treated them as loans from Athena's treasury' and 'a kind of 'branch' bank/treasury was operating on the island of Samos'.

previous treasurers. The payments were made in Athenian owls (ll. 32-33) and in foreign currency such as staters of Lampsacus and Cyzicus (ll. 95-102). Bullion of gold was also used (ll. 105-11). An amount of silver was designated as coming from the Parthenon. Probably this indicates use of non-monetary possessions of the goddess. Payments were made for military operations, to the *athlothetai* and to the *trieropoioi*.

The expenditure of the treasurers of Athena for the period 408/7-407/6 was recorded on the reverse of the so-called Choiseul Marble (Fornara 158). The accounts cover a period between Prytany VIII 23 and Prytany X 33 of the year 408/7 BC and between prytany I 1 and Prytany II 36 of the year 407/6, that is, a span of 158 days.<sup>37</sup> The sums recorded were again small (the preserved figure of 17 T and 1,620 dr. is the highest one). The purpose of the loans was not designated in many cases. The bulk of recorded expenditure was made for the payment of the *diobelía*. There is mention of an obscure dole of one obol (l. (ll. 9- 14)).<sup>38</sup>

The Treasurers of Athena kept publishing their accounts until the end of the Peloponnesian War. The inscriptions *IG I<sup>3</sup>* 378, 379, 380 probably represent accounts of the years 406/5, 405/4, 404/3 BC respectively. In the accounts of the sacred loans from the *Tamiai* to Athens of the year 406/5 BC we find payments made to the *athlothetai* for the Panathenaea. Some of the payments were made from funds from the Opisthodomos (l. 19). Although there are references to Athenian coinage, the

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<sup>37</sup> Pritchett (1977) Table I p. 34, Table II p. 36

<sup>38</sup> Pritchett (1977) pp. 45-46 suggested that the obol-fund was the regular donation for war orphans who received from the state an obol per day. For instance, the Decree of Theozotides in 403/2 (Harding 8) was concerned with the orphans of those who died helping the democracy and an obol per day was allocated for their maintenance. Also Lysias *Against Theozotides* Fr.A, B.

staters of Cyzicus are prominent. In the accounts of the *Tamiai* for the year 405/4 (*IG* I<sup>3</sup> 379) the *anathemata* located in the Hekatompedon and in the Parthenon were to be melted down (ll. 37-8, 44-45) along with some silver *phialae* (ll. 32-5). One payment was made to the jurors (l. 101). Certain payments were made in the 'gold Attic staters' (ll. 54-60). The sums of money which appear in the accounts of 404/3 BC are, mostly, in foreign, currency, namely in staters of Aegina (l. 3) and of Corinth (l. 4) and in gold pieces of Phocaea (l.5).<sup>39</sup>

From the accounts of the Treasurers of Athena inscribed on stone in the second half of the fifth century, we can argue first that Athena's treasury was Athens' main 'bank' for, at least, the second half of the fifth century. Second, Athena's treasury was the state war-chest during the Peloponnesian War. Third, the small expenses in the financial accounts of the last years of the war reveal that either Athena's treasury was depleted or that other financial resources than Athena's purse funded the high expenditure of Athens during the last years of the war. Finally, the financial deficiency that the long war engendered led to changes in the ways Athena's treasury operated the economy of Athens.

It is clear that the documents of the Treasurers of Athena are an important source for the reconstruction of Athens' economy during the great war. However, it is necessary to discuss whether and how the economic practices operated by the treasury of Athena were affected by the exigencies of the war.

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<sup>39</sup> Woodward (1963) pp. 144-150.



In the first place certain administrative changes occurred concerning the procedure of the loans made to the state by the Treasurers of Athena in the course of the Peloponnesian War. The formulaic provision in most of the financial documents at our disposal is that certain money was paid from the Treasurers to the *hellenotamiai* (a name of a *hellenotamias* with his demotic follows) and to his colleagues (καὶ χουνάρχουσιν). In some documents the payments were made to the *hellenotamias* and to his colleagues and to the *paredros* (who is named) and to his colleagues.<sup>40</sup> In the financial documents published after 410 BC each payment was made to a different *hellenotamias* and to his colleagues. For example, in the accounts of the year 410/9 BC (ML 84) after the sixth prytany each payment was made to a different *hellenotamias* while in the accounts of 418/7-417/6 BC (ML 77) the money from the treasury of Athena was paid to the same *hellenotamias* and to his colleagues. This change in the procedure of the payments of Athena's treasurers has been explained because 'particular groups of *hellenotamiai* dealt with particular types of business'.<sup>41</sup> In the records of the loans made to Athens from the Treasury of Athena Polias in the years 426/5-423/2 (ML 72) certain payments were made directly from the *Tamiai* of the goddess to the recipients, for example, to generals (l. 19). However, in the accounts of the year 408/7 (from Prytany VIII 23 to prytany X 33) a new element (or an irregularity) in the standard procedure appears. The *Logistai* appear both as joint recipients with the *hellenotamiai* and paymasters of Athena's money (i.e., ll. 9, 15, 17, 20). In two instances they are listed as the sole recipients. Pritchett attributed this

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<sup>40</sup> In some early documents the board of the *hellenotamiai* was recorded by the name of the secretary, e.g. in the first tribute quota-list of 454/3 BC (Fornara 85). In some documents the names of the *hellenotamiai* were recorded individually, e.g. in the tribute quota-list of 418/7 BC (ML 75). For the ways Attic writers and composers of Attic documents refer to a board officials, e.g. to the *hellenotamiai* or to Athena's treasurers, see Dover (1960) pp. 63-67. Dover discredited the idea of a 'chairmanship' among Athenian magistrates. Thompson (1970) p. 55 maintains the view that the treasurers of Athena had a chairman in regard to the consistency with which a single treasurer is named in the accounts and in the inventories. See Develin (1986) pp. 67-83.

<sup>41</sup> Thus 'the name of the *hellenotamias* showed what the payment was for'. Andrewes (1953) p. 7.

irregularity to the fact that different financial boards made transactions for the same fund. In addition, the *hellenotamiai* were active at Samos at that period of time and thus *logistai* were called on to share their duties.<sup>42</sup>

Another change that we can observe on the Treasurers of Athena financial documents is that in the earliest of those the purpose of each payment was designated. But in the latest documents the purpose of many payments was not specified while the payment for the *diobelia* appears, almost exclusively, in documents dating towards the end of the fifth century.

A striking change in the published records of expenses of the treasurers of Athena is the omission of the precise date of the loan in the accounts for the first five prytanies of 410/9 BC (ML 84=Fornara 154). Only the *prytanis* was recorded but not the exact day (e.g. in Aiantis, the first prytany; not, e.g. in Leontis, the sixth prytany, on the third day as it was for the remaining *prytaneis*). Such an omission might have affected the calculation of interest on the loans.

In the accounts published under the rule of the Four Hundred (ML 81) the expenses of the Treasurers of Athena were recorded on the basis of month and day, not on the basis of *prytanis*. In the financial documents published by Athena's treasurers in the years 405/4 and 404/3 the payments recorded were dating merely by the days of the successive *prytaneis* without mention of the months.

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<sup>42</sup> (1977) p. 40 and Samons II (2000) p. 280.

Certain changes, which occurred in the format of the financial documents of Athena's *Tamiai*, indicate, to some extent, not only administrative changes but also changes in economic procedures. By saying this, we do not mean that administrative modifications, always reflect changes in economic policies. Athenian documents inscribed on stone displayed considerable discrepancies and inconsistencies. But where the accounts of the treasurers of Athena are concerned we can use such changes to reconstruct the economy of Athens towards the end of the Peloponnesian War when depletion of the financial resources of Athens was expected and thus a financial crisis along with economic measures in order for any such crisis to be overcome.

The study of the financial documents from Athena's treasury makes clear that towards the end of the war financial difficulties were plaguing Athens. How did the city counter that financial predicament? How did Athens finance the war operations, especially, in the last years? On the above evidence of the financial documents published by the treasurers of the sacred money the following points seem worth noting.

First, during the last years of the Peloponnesian War the loans made by Athena to the state were comparatively small. Apparently, such small payments were not intended for the high expenditure of the operations of the war. In addition, whenever their purpose was specified it was mainly for the payment of the *diobelia*. In my view, small payments from Athena's purse were made because, first, Athena's treasury was depleted from silver coins and, second, because the war was financed by other resources. This also means that the war was not any longer funded from capital reserved in the city's treasuries but from disposable income. Here we discuss the first

suggestion. The Athenians had to finance the Peloponnesian War by expenditure in cash and, more specifically, in Athenian owls. Thus the deterioration of Athens' finances and the need for the Athenians to touch the iron reserve (Thuc. VIII 25). However, the supposed economic crisis was related to the lack of liquid money in good Attic silver (*argyron episemon*) rather than with thorough exhaustion of Athens fiscal resources.<sup>43</sup> Consequently the treasury of the goddess did not possess enough silver owls to meet the needs imposed by the war for payments in cash. The accounts of Eleusis from 408/7 BC (IG I<sup>3</sup> 386-387) shows that the *epistatai* of the Eleusinian goddesses handed over to the treasurers of Athena (or of the Other Gods, see below) the amount of 20,000 dr. in silver coin and they also received gold as surety (ll. 173-183). So we can argue that the high expenses of the war deprived the treasury of Athena of a surplus in Attic coins.<sup>44</sup> In addition, we have a clear picture that the economy of Athens was a monetary economy, since it relied on liquid assets. Therefore the melting down of dedications on the Acropolis was the very last undertaking of the Athenians in order to procure coined money.

Second, the lack of liquid money from Athena's chest during the last years of the war led to urgent economic measures, that is, the liquidation of the bullion accumulated in the *cella* on the Acropolis. In 406/5 BC the treasurers of Athena transferred items kept in the *Pronaos* to the *hellenotamiai* (IG I<sup>3</sup> 316). The bullion of silver was converted into Athenian owls. In the last inventories of the Hekatompedon before the fall of Athens (IG I<sup>3</sup> 341, 342, 406/5, 405/4 BC) and those of the Parthenon (IG I<sup>3</sup> 359-362) some irregularities are found which have been attributed to the use of the non-

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<sup>43</sup> The reassessment of the tribute did not result in the influx of coined money in Athens. Furthermore, the Spartan occupation of Deceleia denied the Athenians access to the silver mines of the Laureion (Thuc. VII 27-8). The coinage of Athens during the last years of the Peloponnesian War supports such a view. See chapter 2.

<sup>44</sup> See W.E.Thompson (1964) p. 103.

monetary dedications for the minting of coins. Many items held in the *Hekatompedon* had disappeared in the sequence of the inventories, because they were probably given away for melting down. The Parthenon inventories also reveal certain transfers of items between various authorities. The inventory of the years 406/5-404/3 BC consisted of non-precious items, because the bulk of the dedications in gold and silver had been used in the previous years for the production of coined money. The use of the gold reserves of the goddess resulted in the minting of gold coinage. Probably before the minting of gold coins, Athens tried to sell bullion in gold (*SEG* X 233, ll. 103-114).<sup>45</sup>

Third, if we look at the financial documents of the Treasurers of Athena published during the Deceleian War, it becomes evident that the city at certain time made an attempt to replenish the funds drawn from Athena's chest. The *Syngrapheis* Decree proposed in 410/9 BC (*IG* I<sup>3</sup> 99) indicates such an effort. According to the decree, as it stands after restorations, the *syngrapheis* recommended repayments of the money owed to Athena. Furthermore, it would be paid back as much money as possible would be paid back (ll. 8-11). On the evidence of this decree we can assume that moneys found their way into Athens. With the repayment of the money owed to Athena the state aspired to create a new reserve. Such a financial recovery might have been the outcome of the Athenian military success at Cyzicus and of the successful collection of money in the area of the military operations by the Athenian generals and of the establishment of the toll station in Chrysopolis, as described by Xenophon (*Hell.* I 1. 22). Furthermore, any improvement of Athens' finances would be the result of the financial policy of the Five Thousand. In order to repel the current financial

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<sup>45</sup> W.E.Thompson (1970) p. 65.

predicament of *euteleia* (Thuc. VIII 1), they decreased domestic expenditure, that is, they eliminated payment for public offices, and concentrated on the increase of war funds. According to Thucydides' judgement on the rule of the Five Thousand, the Athenians 'were ruled in a good way, or behaved well' (*eu politeusantes*). This new form of government was a mixture of democracy and oligarchy (*xyncrasis*) and it worked successfully and enabled the city to overcome the current hardships (VIII 97).<sup>46</sup>

Fourth, any recovery of the finances of Athens was partial and short-lived. The main treasury of Athens, that is, of Athena, was left by the end of the war with a small annual income while it was deprived of its reserve. Therefore the treasurers of Athena and of the Other Gods were amalgamated into one board in 406 BC.<sup>47</sup> Aristotle (*Ath. Polit.* 30.2) described the combined board of the Treasurers of Athena and of the Other Gods as part of his account of the constitution of the Five Thousand and there is an early reference to the title ταμίαι τῶν ἱερῶν χρημάτων τῆς Ἀθηναίας καὶ τῶν ἄλλων θεῶν (*IG II<sup>2</sup>* 1370, 1371, 413/2 BC). Nevertheless the new board came into existence later some time around 405/4 BC. In the decree given by Andocides (1.77) there is a mention of the combined board. The earlier inventory of the treasurers of Athena and

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<sup>46</sup> The fiscal policy of the oligarchs has been considered as revolutionary (see Samons II (2000) pp. 254-258). I do not agree with this argument. In my view, what is striking is that the new economic programme was assumed by an oligarchic government and not by democracy. Why did democracy not offer the means for a fiscal policy appropriate to the current circumstances? A plausible reason may have been that many of the democratic institutions such as pay for holding public offices were introduced at the very time of the Athenian *arche* when Athens enjoyed immense prosperity. Thus many of the money-based institutions of the democracy were the result of opulent financial resources which were no longer available to Athens to meet the economic crisis caused by the war. Democracy was for the benefit of the 'many' and thus the people had a share in the *polis* wealth (i.e., the role of the thetes as seamen (*nautikos ochlos*)) under payment and thus their opposition to oligarchy (Thuc. VIII 72.2)). On the contrary, oligarchy was for the benefit of the few. So it was under oligarchy that cuts in public expenses and in public payments were introduced. In this way, we can argue that the economic policy of the Five Thousand proved effective for the economic crisis in Athens to be resolved but we cannot dismiss the fact that it was rather the usual economic policy of oligarchies than the mere outcome of war exigencies.

<sup>47</sup> They remained so until 385/0 BC, when they separated. In 342/1 BC they were combined and remained so until the end of the fourth century.

of the Other Gods is dated to 398/7 BC (*IG* II<sup>2</sup> 1388, Harding 10). What was the purpose of the amalgamation of the two boards of treasurers? Although we do not have at our disposal documents published by the treasurers of the Other Gods and thus we know nothing about their activities in the last years of the war, we know that the board existed and set up stelai. This is on the evidence of a catalogue from the era of Lycurgus recording the stelai erected by the treasurers of Athena and by those of the Other Gods.<sup>48</sup> The depletion of the sacred funds of Athens' main treasury in the course of the lengthy war decreased its ability to finance public expenditure. Thus the sacred moneys of Athena and the sacred moneys of the Other Gods could function as a combined treasury in order for the enormous expenses of the naval war to be met. In that fiscal decision of the Athenians there was, again as with the Callias' decree, an attempt at centralisation of the sacred funds of Athens which, to a great degree, financed the war machinery.

Fifth, we have already mentioned that the *Rationes* of Athena towards the end of the war dealt with respectively small amounts of money and with payments which were not meant for military undertakings. A very striking example of this is the absence from the accounts of the year 410/9 of any payment made to the generals at the Hellespont at the very time when military activity was concentrated in the area of the Hellespont.<sup>49</sup> Xenophon's narrative shows that the generals managed to pay for the rations of the Athenian army and build a military fund by practices employed on the spot (I 1.18-22). In addition, Athena's accounts (i.e., *IG* I<sup>3</sup> 375) argue for sums collected and spent on the spot. However, this does not seem an adequate explanation of the fact that only a few military operations were funded by Athena's purse at the

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<sup>48</sup> See Linders (1975) p. 60 no. 150

<sup>49</sup> See Andrewes (1953) p. 2.

final stage of the war, while certain amounts were allocated for civic stipends such as the *diobelia*.<sup>50</sup> The impoverished treasury of Athena could not afford to make heavy payments due to high military expenditure.

How did Athens finance its war machine during the last years of Thucydides' great war? The obvious answer to the question is that there was a treasury other than that of Athena's which mainly financed Athens' military enterprise at the time of the Deceleian War. It is necessary to discuss the relation between the treasury managed by the treasurers of Athena and the treasury managed by the *Hellenotamiai* in order to give a firm answer to the above question.

Athena herself owned a good amount of money. In fact, it was a very rich treasury. How far could the Athenian state rely on it for heavy expenditure before and during the Peloponnesian War? From the sequence of loans to the state discussed above, it seems that Athena's treasury could afford to pay out large amounts of money, and over a long period of time. For example, the expenses of the Samian War which amounted to some 1,500 T were funded by Athena's treasury (ML 55). The expenses of the squadrons sent to Corcyra in 433 BC, at the eve of the Peloponnesian War, though less than those of the Samian War, were again paid by Athena's sacred money (ML 61, l. 4). Therefore, Athena's financial resources were large enough for many of the state expenses to be met. Also, it has been argued above that the treasury of

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<sup>50</sup> Athens' economic policies during the Peloponnesian War strike modern scholars as unexpected. Thompson (1970) p. 63 stated that 'we cannot be certain that the administration of Athenian finance proceeded in a normal, predictable fashion'. For instance, during the Peloponnesian War, despite the fact that the Athenian politicians did not initiate building projects, public works were taking place in Attica. Such undertakings are not reported for the period of the Archidamian War but some costly works as the *diateichisma*, the temple of Athena Nike are reported for the following years of the Peloponnesian War. Some building projects were also undertaken in some demes in Attica. See Boersma (1970) pp. 82-83 and ch. VII.



Athena was rich enough to finance the building programme of the Parthenon without receiving money from the chest of the Delian League. However, at that time, Athens held its *arche* and managed the money of the Delian League. The principal question is how much of the reserve fund of the League was handed over to Athena's treasury.<sup>51</sup>

On the evidence of certain Athenian decrees the tribute money was brought to Athens. In the decree concerning the payment of tribute passed on the motion of Cleinias in, probably, 447 BC (ML 46=Fornara 98) there was a clear reference to the dispatch of the tribute to Athens (l. 10) while the decree was concerned with the allies' discipline to send their tribute to Athens without fraud.<sup>52</sup> If the tribute was brought to Athens every year, it would be accumulated in the treasuries of the city. Since the treasury of Athena was the main treasury of Athens, we expect that some of the tribute moneys were left with Athena.<sup>53</sup>

The Callias financial decrees provide evidence for this. The origin of the 3,000 T in Attic coinage brought to Athena on the Acropolis in the first of the Callias Decrees has been much discussed. According to the editors of the *ATL* (III pp. 326-8), this amount of money represented the total of a series of payments from the reserve fund of the League contributed to Athena's chest. They estimate that 200 T were left aside

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<sup>51</sup> It seems more probable that the tribute which found its way to Athens was actually the surplus tribute. Substantial amounts of money from the assessed tribute of the allies were spent on constructing new ships, maintaining peacetime patrols and on conducting several campaigns. For example, in the period from the institution of the Delian League until the peace of Callias many and costly campaigns were financed from the League's money (Thuc. I 105: Eurymedon, Thuc. I 104, 109: Egypt, Thuc. I 112: Cyprus). See Unz (1985) pp. 21-42 who argues for 'the surplus' tribute hypothesis.

<sup>52</sup> Isocrates (8.82) gives a very vivid picture of the accumulation of tribute (or better of the surplus of the funds derived from the tribute: *τό περιττνόμενον* (ἐκ τῶν φόρων ἀργυρίου) (Meiggs (1972) p. 434)) in Athens and, simultaneously, of the arrogance of the Athenians at the peak of their power. According to the decree passed some time in the early years of the Archidamian War to which the text refers, the Athenians used hired porters to carry the money from the tribute into the orchestra, talent by talent, during the Great Dionysia.

<sup>53</sup> At least, Athena's treasury seems to be the main treasury of Athens on the evidence of the sources. Our sources are mainly the accounts of the treasurers of Athena in which massive loans to the state for large expenses to be paid are recorded.

as reserve fund every year from 449/8 to 434/3 BC. Thus the 200 T in the Callias B designated for the payment of the loans to the Other Gods represented such an instalment. Gomme maintained that until 434/3 the treasury of the state possessed a substantial surplus which, in Callias' motion, was transferred to the Acropolis for safer keeping.<sup>54</sup> It seems to me more probable that the 3,000 T brought to Athena were drawn from the League's treasury and not from the state treasury, as it has been proposed. We must decide whether the treasury of the *Hellenotamiai* existed as an independent treasury or whether it had been amalgamated with Athena's treasury, which operated as Athens' war-chest during the Peloponnesian War.

It seems that the tribute reserve was used by the Athenians to meet the elaborate building programme in the Periclean era.<sup>55</sup> Such a statement lies in accordance with Plutarch's anecdote regarding the use of the tribute money for the splendid constructions in Athens at the Periclean age (*Pericles* 12-14).<sup>56</sup> Therefore, the League's money, which was previously managed by the *Hellenotamiai*, was brought to Athena's cella on the Acropolis and was under her treasurers' administration. This action taken by the Athenians indicated how the money of the allies was transformed into Athens' money and thus in a real and symbolic way it found its way into the treasury of the city's protector goddess. Furthermore, this activity allowed the Athenians to manage their finances through the long-established process, that is, through loans made from the funds of Athena's treasury. But then, the role of the

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<sup>54</sup> *HCT* II p. 31.

<sup>55</sup> This is not contradictory to the evidence that the treasury of Athena financed the Parthenon because the main issue is how much of the money owed by Athena came from the tribute of the allies. Kallet-Marx (1989) pp. 252-266 maintains that the treasury of Athena did not contain any other tribute than the *aparche* and thus tribute did not fund the Parthenon.

<sup>56</sup> In Plutarch's account we can find the ideological reasoning on the exploitation of the money of the allies by the Athenians, that is, the maintenance of the war machinery against the barbarians and the engagement of the Athenian citizens in the abundant resources of the city through their yielding participation in public works (12.3-5).

*Hellenotamiai* would be rather reduced to that of collectors of tribute than of treasurers of imperial funds.

Thucydides gives some information about the role of the *hellenotamiai*. His narrative was mainly concentrated on the collectors of the tribute (*argyrologoi*). However, in the course of the war certain changes occurred in the procedure of the tribute collection. Different authorities than the *hellenotamiai* were engaged in the tribute collection. In some cases the imposition of tribute was the outcome of military success. For instance, after the capture of the island of Cythera, which was probably Sparta's *emporion*, the victorious Athenians imposed the outstanding tribute of four talents annually (Thuc. IV 53-57). Also, in the last years of the war, the term *argyrologoi* found in Thucydides and in Xenophon was referred to collectors of money which, only in some cases, might have been money due to tribute payment. For example, in *Hellenica* (IV 8.30, 35) we find the Athenian generals Thrasyboulos and Iphicrates engaged in the procedure of the *argyrologein* in a period after the fall of Athens. In the *Histories* of the Peloponnesian War the role of the *hellenotamiai* either as collectors of tribute from the allies or as treasurers of the imperial income is vague, especially, during the last years of the war and in the period afterwards when the procedure of collecting money (*argyrologein*) was concentrated on the collection of money required for the maintenance of the militant forces. Therefore we cannot confine the office of the *hellenotamiai* merely to collection of tribute.

Inscriptions provide some information regarding the role of the *hellenotamiai*. None of the Tribute Quota Lists diminish the role of the *hellenotamiai* in respect of the administration of the tribute of the allies. For example, in the Tribute Quota list of

454/3 BC (Fornara 85) of 418/7 BC (ML 75=Fornara 142, l. 4) they appear as responsible for the tribute quota (l. 1). In the decree of Cleinias (ML 46) the duties of the *hellenotamiai* were clearly described. According to the decree, the *hellenotamiai* were to inform the Athenians about the tribute payments (l. 20) while they would publish the assessment of the tribute (l. 45).<sup>57</sup> In the decree resolved by the Athenians in 410/9 BC to honour Neapolis in Thrace the sum of 5 T and 4,800 dr. was supplied to the *hellenotamiai* by the Neapolitans (ML 89=Fornara 156, l. 34).

Their role however was not merely administrative. In fact, the board of the *hellenotamiai* did not primarily function as collectors of tribute money. Furthermore, many officials were engaged in the collection and administration of the tribute. With the Cleonymus decree dated to 426 BC (ML 68) the appointment of tribute collectors (*eklogeis*) in each one of the tributary to Athens cities was voted.<sup>58</sup> The role of the *hellenotamiai* was defined as keeping records and publishing both the tribute payers and the defaulters. Also, from the decree of the reassessment of the tribute of the Athenian empire passed in 425/4 BC (ML 69=Fornara 136) it becomes clear that the tribute would be the responsibility of the generals (ll. 45-8). They would consider how the tribute money would be spent either on expeditions or on other expenditure.<sup>59</sup> The

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<sup>57</sup> Antiphon (5.69-71) mentioned the execution of nine *hellenotamiai* on charges of financial misconduct.

<sup>58</sup> The role of the *eklogeis* as collectors of the tribute from the cities is given in Suidas. The *eklogeis* were not Athenians as it was widely thought. In Antiphon's speech *Peri tou Samothrakon phorou* we find a body of men chosen from the wealthiest citizens of Samothrace to be in charge of the collection of tribute. See Meritt (1937) ch. 1. A similar board of *eklogeis* was appointed for the collection of the first-fruits at Eleusis (ML 73). The allied cities were to offer first-fruits to the Eleusinian goddesses. *Eklogeis* were to be chosen by the cities to collect the grain and hand it over to the *hieropoioi* (ll. 14-18).

<sup>59</sup> The new assessment of the tribute would allow the People to meet the war expenses (ll. 39, 46). There is no reference to transfer of the money to any of Athens' treasuries. It has been regarded as strong evidence that the Athenian war against the Peloponnesians was financed by tribute funds. However, at the time the decree was passed the Athenians carried the war successfully, especially after Cleon's success on Sphacteria. Also, the treasurers of Athena were in charge of significant amounts of money kept on the Acropolis. Thus this proviso of the decree is not related to severe financial problems

Athenian decrees in the course of time reveal that changes occurred in the official administration of the tribute payments, since the Athenians were concerned with the regular flow of the tribute in the treasuries of the city, especially, at the time when they faced severe losses in the battlefield and revolts of their allies. In general, the Athenian decrees reveal a great number of officials involved in the administrative machinery of the state, particularly in the period of the Athenian *arche*.<sup>60</sup>

Did the *hellenotamiai* function as treasurers of the imperial money? Were they in charge of the tribute revenues in order to make payments to the state from their treasury? In the inscription concerning work on the Athenian water supply dated to *ca.* 437/6 (Fornara 117) we find the provision that the money for the work would be paid by the allies' tribute (l.15). But there is no mention which board of treasurers managed the imperial money at that time. Although the money did not derive from the quota paid to the goddess, we cannot rule out the possibility that it was under the administration of Athena's treasurers. But the idea that the money came directly from the purse of the *hellenotamiai*, is a mere speculation. In the building-accounts of the Propylaia (ML 60=Fornara 118) money educed from the *hellenotamiai* was recorded. It seems that they were in charge of the money from the *aparche* (l. 13) and of money derived from transactions with certain generals (l. 16). Also, the 3,000 T brought to the Acropolis as it was mentioned in the Papyrus Decree (Fornara 94) came from the tribute money. The sum of 5,000 T was brought from the League's chest to the public treasury (*demosion*). The total sum of 8,000 T was used for funding public works (l. 3-4, 9). The imperial funds were not under the management of the *hellenotamiai* but

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but, more probably with the imperialistic policy of Cleon and his followers. For Cleon's influence on the assessment see ML pp. 194-197.

<sup>60</sup> Jones (1957) p. 103 notes that Athens' system of financial administration 'seems unnecessarily complicated, with its many boards, each dealing with one stage of the process. The object probably was to make peculation or improper expenditure of public funds ...difficult...'.

they were stored in the public treasury and, probably, in Athena's treasury if the word *polis* in the text conveys the meaning 'on the Acropolis'.

On the evidence of the sources it seems that the *hellenotamiai* had responsibility for the imperial resources of Athens. However, we cannot argue that the surplus of the tribute money was, entirely, under the administration of the *hellenotamiai*. Moreover, since the Delian League was gradually turned into an Athenian hegemony and, consequently, the tribute reserve was brought to Athens, a great volume of the tribute surplus was probably kept on the Acropolis and thus was under the accountability of Athena's treasurers. Some of the tribute was reserved in the public treasury. The minor payments from the public treasury, as we argue later in the chapter, advocate that a small portion of the tribute found its way into the public treasury.

So far our sources indicate that some of the tribute money was under the administration of the treasurers of Athena and of the treasurers of the public treasury. But, at the same time, the treasury of the *Hellenotamiai* existed as an independent treasury which funded many of the state expenditure along with the other treasuries of Athens. Part of the tribute surplus was stockpiled in the chest of the *hellenotamiai*. The construction of the Propylaia was funded from the treasury of the *hellenotamiai* along with other treasuries (ML 60, ll. 12-4, 16). According to the Callias Decree, some of the money owed to the Other Gods was to be paid by money under the management of the *hellenotamiai* (ll. 5-6). In some Athenian decrees we find the clause that the *hellenotamiai* would supply the money for setting up the stele, where the decree was inscribed, on the Acropolis, e.g., the Athenian decree which honours the Samians in 405 BC (ML 94, ll.39-40). It seems that the treasury of the

*hellenotamiai* was an independent chest for Athens. The tribute money was collected by several officials throughout time. Also, the surplus of the tribute payments was at times allocated either to Athena or to the public treasury. However, the mass of the imperial money was under the financial administration of the *hellenotamiai*. The tribute reserve found its way into their treasury which funded military and public expenditure. Apparently, there is no good evidence about public disbursements financed by the *hellenotamiai* treasury, since the imperial treasurers did not publish records of their expenses as the treasurers of Athena did in the second half of the fifth century. Also, many of the financial documents at our disposal refer simply to payments from the imperial money without designation of the particular treasury where the money derived from.

Nevertheless there is an anomaly in regard to the treasury managed independently by the *hellenotamiai*. Why did the treasurers of Athena hand over money from their treasury to the *hellenotamiai* in order for miscellaneous public expenses to be met? It has been thought that the records of the loans made to the Athenian state from the treasury of Athena where the *hellenotamiai* appear as the main recipients of that money mean that the imperial treasury was probably, at some point, absorbed by the treasury of Athena. I disagree. Even in the earliest of the preserved documents concerning the loans from Athena certain amounts of money was paid out of the goddess' treasurers to the *hellenotamiai*. At about 420 BC the imperial money of the *hellenotamiai* was still enough to maintain high expenditure. The majority of the allied cities paid regularly their tribute to Athens. On this ground, the Athenians attempted to increase the tribute payments with the reassessment of 425/4 passed on Thoudippus' motion.

Even if the entire tribute surplus did not find its way, as we argued earlier, into the *hellenotamiai*'s treasury, it is nevertheless likely that their treasury was rich. In 411 BC in the context of the financial programme advanced by the Five Thousand the number of the *hellenotamiai* was increased to twenty and their office was defined as that of the treasurers (Arist. *Ath. Pol.* 30-32). Thus the money they received from the treasurers of Athena was rather related to the administrative practices and the ideological conceptions of the Athenian economy than with the lack of sufficient funds. The structure of the Athenian economy was such that the *hiera chremata* of Athena functioned as the main 'bank' of the state. Thus the administration of the state finances was concentrated on Athena's resources. Moreover, the systematic keeping of financial records in Athens was, to a great degree, a procedure associated with Athena's treasurers. Hence the payments from Athena's purse to the *hellenotamiai* concurred to the system operating the Athenian economy.

We discussed above the evidence suggesting that the war was to be financed by imperial money. So the enormous expenses of the long-term war resulted in the depletion of the *hellenotamiai*'s treasury. Also, many of the allies revolted from Athens and so did not pay their assessed tribute. The harsh character that the Athenian *arche* assumed during the war made many of the cities reluctant to meet their tributary obligations. The replacement of the tribute payment by the 5 per cent tax (the *eikoste*) levied since 414 BC probably affected the administration of the imperial money.<sup>61</sup> Furthermore, the cities involved in the Greek fighting were in financial distress. Certainly, such a situation affected seriously Athens' imperial resources and, consequently, the funds of the treasury of the *hellenotamiai*.

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<sup>61</sup> The last assessment of tribute has been placed in 410 BC on the evidence of five fragments found in the Agora excavations. Different dates have been proposed for these fragments of the tribute lists. See Meiggs (1970) pp. 438-439.



If the depletion of the imperial treasury in the course of the war seems likely, then can we argue that the chest of Athena became the only treasury of Athens during the last years of the war? No. The records of the loans made by Athena's treasury to the state reveal that the money for public expenditure in the last years of the Peloponnesian War down to its end came from that treasury. However, the sums were modest and the payments were concentrated rather on domestic expenses such as the *diobelía* than on military. Certainly, the treasury of Athena had been impoverished throughout the war and it could not afford significant resources. But since the war was at a critical stage its financial maintenance might have been the state's priority. If Athena did not finance military operations in the last years of the war as the financial records at our disposal indicate, then changes in the economic practices of Athens might have occurred. What seems probable is that the *hellenotamiai* spent the money they received immediately and thus they did not manage substantial reserve. Also, as it appears from the *Hellenica*, the generals were entirely engaged in the securing of the provisions of their armies. Therefore the *hellenotamiai* as the treasurers of the imperial money were in office until the end of the war and the fall of the Athenian *arche*.<sup>62</sup>

To sum up. Firstly, the treasures of the gods of Attica financed some of Athens' public expenses. The moneys managed by the board of the treasurers of the Other Gods represented only a fraction of the property belonging to various Attic sanctuaries.

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<sup>62</sup> There is a reference to the office of the *Hellenotamiai* in a document from a period after Athens' fall.

Secondly, the treasury of Athena was the main bank of Athens. During the second half of the fifth century the treasurers of Athena made massive loans to the state.<sup>63</sup> At the apex of Athenian imperialism certain sums were transferred from the tribute reserve funds to the treasury of Athena but there is no indication that the tribute money was added into Athena's treasury on the Acropolis.

Thirdly, the *hellenotamiai* were in charge of the tribute money. Their role was defined, basically, as that of the treasurers of the imperial money. Their purse financed public works and, above all, the Athenian war against the Peloponnesians.

Fourthly, the dispersal of money from Athena's treasurers to the *hellenotamiai* was not because the treasury of the *hellenotamiai* was at some time replaced by the treasury of Athena. This was the outcome of long-established economic practices according to which the 'sacred' money of Athena functioned as the main source for financing the *polis* expenditure. Also, in the course of the war the influx of imperial money in ready cash decreased while the actual naval warfare demanded great payments in cash. Thus the imperial moneys were spent in lieu and their treasurers managed a tiny surplus.

So far we have dealt with the 'sacred' and imperial money of Athens and its management by the treasurers of Athena and of the Other Gods and of the

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<sup>63</sup> The *polis* borrowings from Athena were made at the rather symbolic interest of 1%. In the loans made by *Athena* there is no clause about surety (*ypothēke*). This is not the case with private loans. There is also evidence of loans made by the gods to states with security. From the fourth century we have a document from the island of Ceos concerning a loan made to the city by the god with the citizens' property as security (*Epigraphia I* 29). After the fall of Athens the public debts to Athena had been cancelled. In the fourth century Athens employed new economic policies in order to amend the destitution in the state economy that the Peloponnesian War brought with. A serious attempt of reorganisation of Athenian finances took place in 378/7 BC (Polyb. 2.62.7, Dem. 27.7, Harpokration s.v. *symmoria*).

*hellenotamiai*. However, a third treasury operated the state finances, that is, the *demosion* meaning public treasury.<sup>64</sup>

Was the *demosion* a rich treasury? Two references to the *demosion* could be interpreted as indicators that a considerable amount of money was stored up in that treasury. First, it is the Strasbourg Decree where, according to Aristides' assessment, the sum of 5,000 T stored up in the public treasury is mentioned. Second, it is Thucydides' reference to the *demosion* in relation to the great expenses of the Sicilian expedition (VI 31.3). The *demosion* was to supply the daily payment of the sailors and to maintain sixty ships and forty hoplite-carrying ships and their officers. The large amounts of money in the public treasury that the above sources indicate seem to be exceptional. For the bulk of the evidence indicates that small amounts of money were allotted to the public treasury and, similarly, small payments were made by this treasury.

The resources of the public treasury seem to be modest. For example, the sum of 100 dr. as fine imposed to each of the *prytaneis* was allocated to the *demosion* (ML 69, l. 30).<sup>65</sup> Money was owed to the public treasury as emerges from the decree concerning Athens' relation with Methone and Macedon passed in 430 BC (ML 65=Fornara 128). There is a clear mention of 'debts which the Methonians are recording as owing to the public treasury of the Athenians' (l. 10).<sup>66</sup>

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<sup>64</sup> The word *koinon* might have also referred to the state treasury. The *koinon* is found in Hdt VII 144.1 in relation to Themistocles' financial reform and in IX 87.2 and in Thuc. I 80.4, VI 6.3. In the Athenian grain-tax law of 374/3 BC (Stroud (1998)) there is a reference to the *koinon* (ll. 5-6) which, in the context of the law, was the state treasury.

<sup>65</sup> The total amount was  $50 \cdot 100 = 5,000$  dr. = ca. 8T.

<sup>66</sup> It is not unlikely that the debts of Methone to the public treasury came from tribute payments. If the recorded debts were such, then they would be relatively small, since the city did not pay heavy tribute. Only a tribute payment of 3 T is recorded for the years 431 and 428 BC.

Relatively modest payments were made by the public treasury. In the inscription of the establishment of a board of Eleusinian superintendents (Fornara 106) there is mention to a pay of 4 obols to each of the elected *epistatai* made by the treasurers of the public treasury (l. 10). Also, the annual payment of 50 dr. to the priestess of Athena Nike assessed by a decree resolved in 424/3 BC was to be disbursed by the *kolakretai*, that is, the treasurers of the *demosion* (ML 71=Fornara 139, l. 10). In the Athenian decree regulating the offerings of the first-fruits at Eleusis the *kolakretai* were to supply the money for the two stelai where the *poletai* would publish the contract (ML 73=Fornara 140, l. 52). Again, the money for the stone stele, where the law about triremes was inscribed, was paid out by the *kolakretai* (IG I<sup>3</sup> 153).<sup>67</sup>

The treasurers of the *demosion* were the *kolakretai*.<sup>68</sup> Their office was completely taken over by the *hellenotamiai* some time around 411 BC in the framework of the political and financial reforms of the Five Thousand.<sup>69</sup> Thus the financial duties of the *kolakretai* as paymasters of domestic expenses had been absorbed by the board of the *hellenotamiai*. Henceforth the *hellenotamiai* had responsibility for payments which

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<sup>67</sup> Different boards were responsible to pay the cost of the setting up of a stele at different times reflecting changes in the administration of public finance. This is to be found in the decrees with which Athens honoured loyal Samians in 405 BC (ML 94=Fornara 166) and in 403/2 BC (Rhodes-Osborne 2). In the earlier decree the money for the inscribing and the display of the decrees was to be provided by the *hellenotamiai* (l. 39). In the second decree the cost of the publication of the decree on the marble stele was to be provided by the treasurers of Athena (ll. 26-8). The cost was substantial but not very high. In the decree with which Athens honours Strato of Sidon passed in 378-6 BC (Rhodes-Osborne 21) 30 dr. (out of 10 T) is paid by the treasurers to the secretary of the council for the writing up of the stele (ll. 15-18). The sum of 60 dr. (out of 10 T) was allocated for the inscription of the stele of the Second Athenian Confederacy in 378/7 BC (ll. 65-9). The cost of setting up the stele was similar in the fifth century. Probably in the fourth century a certain sum was reserved for such public expenses (probably 10 T as both inscriptions indicate).

<sup>68</sup> The Souda s.v. *kolakretai*: According to Androtion (324 FGrH fr. 5), the *kolakretai* were replaced by the *apodektai*. The *apodektai* appear in Athenian documents for the first time in 417 (IG I<sup>2</sup> 94, ll. 16-17). The decree passed by the Athenians in 407/6 BC to order the building of ships and honour Archelaus of Macedon (ML 91=Fornara 161) refers to the *apodektai* (ll. 6-7). The money for the loan made by the generals would be taken by the *apodektai*. For the office of the *apodektai*: Ar. *Ath. Polit.* 48.1-2.

<sup>69</sup> The *Kolakretai* make no appearance in financial records after 418/7 BC (IG I<sup>3</sup> 84). However, an emergency financial board, that is, the *Poristai*, is attested for a period between 419 (Antiphon 6.49) and 405 (Arist. *Frogs* l. 1505). See *Ath. Pol.* 28.3 with Rhodes *Comm.* ad loc.

previously were made by the *kolakretai*. Even as early as in 415/4 the payments made by the *hellenotamiai* to the *athlothetai* reveal the shift of duties from the one board to another since such payments were expected to be made by the *kolakretai*.<sup>70</sup> The editors of the *ATL* iii. 364 think that the *kolakretai* were restored in 410 to pay juries.<sup>71</sup> During the Deceleian War the board of the imperial treasurers held responsibility to defray military and civic expenses. We can conclude that the treasury of the *hellenotamiai* functioned as Athens' treasury along with that of Athena's until the end of the war and the end of the Athenian *arche*.

From the above argument certain conclusions emerge. Athens' chest consisted of the sacred monies of the city's gods and of the imperial money. There was no functional distinction between the 'sacred' money of the Attic sanctuaries and the tribute money since both operated the economic system of imperial Athens.

The revenues of the city consisted of coined money and of bullion. However, monetary assets were decisive for the economic prosperity of Athens and for the finances of the war. The non-monetary wealth of the city's treasuries was used only at the time of financial crisis. This suggests a remarkable degree of monetization of the Athenian public economy at the time of the Peloponnesian War.

Different boards of treasurers were in charge of the city's assets. A number of Athenian decrees gives evidence that the treasurers of Athena and of the Other Gods, the board of the *hellenotamiai* as the treasurers of the tribute reserve and the board of the *kolakretai* as the treasurers of the *demosion* operated the Athenian economy at the

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<sup>70</sup> Pritchett (1970) p. 11, Samons II (2000) pp. 259-260.

<sup>71</sup> This view has been dismissed by Meiggs-Lewis p. 258.

time of the Athenian *arche*. Each board of treasurers was in charge of different payments, i.e., the *hellenotamiai* with military expenses, the *kolakretai* with domestic expenditure. Thus fifth century Athenian economy had reached a level of specialisation which, undoubtedly, was indicator of advanced economy.<sup>72</sup>

The records of the treasurers of Athena, our main source, describe the treasury of Athena as the main bank of the state. The mechanism which operated the goddess' treasury was loans made to the city through certain boards of treasurers and officials. The money handed over from Athena's treasurers to certain officials, mainly, to the *hellenotamiai*, was used for the payment of miscellaneous expenses, military and civic. The prevailing place of Athena's treasury in the Athenian economy in the period towards the end of the fifth century was because of the Athenian mentality, according to which public economy was built up around Athena, and of an attempt of administrative centralisation of the finances of the city.

The gradual depletion of the treasuries led to changes in the structure of the Athenian economy. Thus the public treasury was absorbed by the treasury of the *hellenotamiai* and the treasurers of Athena and the treasurers of the Other Gods worked as a combined board of treasurers. Hence by the end of the fifth century the Athenian economy had been centralised, to a considerable degree, as the result of the exigencies of the war.

### **3. Emergency economic measures during the Peloponnesian War**

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<sup>72</sup> A great degree of specialisation in the Athenian economy was achieved in the fourth century. Certain funds were allocated for specific expenses such as the *stratiotika chremata*.

Emergency economic measures were employed by Athens during the Peloponnesian War. First, there was the *eisphora*, a tax imposed on Athenian citizens in 428 BC (Thuc. III 19). Second, there was the *eikoste*, the 5% tax on imports and exports by sea imposed upon the subject-cities in 413 BC (Thuc. VII 28.4 and Ar. *Frogs* l. 363).

The *eisphora* was a capital levy upon the property of the residents in Athens and Attica, both citizens and metics, based on the individuals' declared assessment (*timema*) of their taxable capital. It was intended for war purposes. It was levied as a given percentage of the value of all taxable properties. The tax was levied at the rate of 1% or 2%.<sup>73</sup> Therefore the funds raised by the *eisphora* were relatively small. In 428 BC the *eisphora* tax yielded a revenue of 200 talents. Thucydides' account of the *eisphora* tax raises two issues. The first issue is whether this special tax on capital was levied for the first time in 428 BC. The word *proton* (for the first time) in Thucydides' text allows the interpretation that either an *eisphora* was levied in Athens for the first time in 428 BC or that it produced the revenue of 200 T for the first time (probably a revenue as large as 200 T).<sup>74</sup> The second interpretation seems plausible because reference to property tax is found in the Callias financial decrees dated to 434/3 (ML 58 B=Fornara 119, ll. 17, 19). The proposal for property tax which was passed after a vote of immunity (*adeia*) was to be a precursor for a similar clause in the decree of Callias.<sup>75</sup>

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<sup>73</sup> Thus the *eisphora* was not a progressive tax. Jones (1995) p. 25, de Ste Croix (1953) pp. 30-70.

<sup>74</sup> The proposal of the *eisphora* tax has been attributed to Cleon (Ar. *Knights* ll. 923-6, Eupolis fr. 278). Probably he was not the originator of the *eisphora* tax but he proposed the imposition of this special tax aiming at the increasing of the war funds. Given his political standing as leader of the people, he possibly aimed at the benefit of the masses, especially of the *thetes* who would be likely to support such a measure. The importance of the *thetes* in Athenian society was now enhanced, for they served as rowers in the Athenian navy.

<sup>75</sup> A direct reference to the *eisphora* is found in the inscription for the Athenian cleruchy in Histiaia dated after 446 BC (*IG I* <sup>2</sup> 42 ll. 22-24) See Brun (1983) p. 22. In the decree by which the Athenians regulated the situation in Miletus, dated to 450/449 BC, there is a reference to the *eisphora* (Fornara 92, l. 58). In the context of the decree, it is not clear whether the tax property was imposed by the

A second issue is which Athenians were liable to this extraordinary direct tax. The answer is not easy because most of the sources refer to the system of *eisphora* in the fourth century. It has been argued that all citizens of the three highest census classes had to pay the *eisphora* in 428 BC. The system of the *eisphora* was based on the Solonian census classes, since the Solonian classes existed during the Peloponnesian War (Thuc. III 16.1).<sup>76</sup> However, the general consensus is that the well-to-do Athenians were liable to the *eisphora* tax. According to Xenophon (*Oec.* 2.6), the well-to-do Athenians had to pay the *eisphora* in war-time and it was a heavy burden for them. The Attic orators are referring to the *eisphora* tax in relation to the well-off Athenians who, along with other liturgies, had contributed to the war fund (e.g. Lysias (12.20) is referring to the many *eisphorai* which he paid as a rich metic).<sup>77</sup> Therefore the rich Athenians were liable to this extraordinary tax. However, the *eisphora* tax payers did not come only from the liturgy class. Since it was a war-tax based on property assessment, it is possible that a larger group of property owners was liable to the tax.<sup>78</sup>

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Athenians or by the Milesians before the date of the decree. In the decree there is a provision that five Athenians were to be sent to Miletus (ll. 4-7). Also, there are references to Athenian officials in ll. 41, 47. So it is not clear whether the word *polis* in line 55 refers to Athens or to Miletus.

<sup>76</sup> Thomsen (1964) ch. VIII. According to his argument, the amount of 200 T was distributed as follows. The metics were to pay one sixth, that is, 33 1/3 T. The remaining 166 2/3 T were distributed over the three classes, that is, 100 T to the *pentakosiomedimnoi*, 50 T to the *hippeis*, 16 2/3 to the *zeugitai* (on the ratio 1, 1/2, 1/6 for each class respectively, according to the Solonian census classes (Pollux 8.129, Arist. *Athen. Polit.* 7.4, Dem. XLIII 54). But see de Ste Croix (1953): the Solonian classes were the basis of the military system not of the fiscal in the fifth and fourth centuries. Thomsen's argument is mainly based on the interpretation of the passage from Pollux (VIII 108). Also, he argues that the same distribution of the *eisphora* pay is to be found in the reform of the *eisphora* system in the year 378/7 BC p. 103. According to the new organization of the *eisphora* system, the Athenians liable to the tax payment were divided into 100 symmories (Philochorus *FGrH* 328 fr. 41, Polybius 2.62.6). Thomsen argues that the 100 symmories (Kleidemos *FGrH* fr. 8) existed before the reforms of 378/7 BC. For the system of tax payment before the Persian Wars, that is, the *naukrariai*, was a group system like the *eisphora* system of 378/7 and thus a similar system operated in Athens in the second half of the fifth century.

<sup>77</sup> In the orators payment of the *eisphora* tax is always connected with *trierarchies* and other liturgies (e.g., Lys. 25.12, 30, 26, Dem. 4.42, 20.28).

<sup>78</sup> The number of the *eisphora* payers has been estimated 6,000 citizens and 1,000 metics. See De Ste Croix (1953) pp. 30-70, Hansen (1991) pp. 114-115.



In the fifth and fourth centuries rich Athenians contributed to state finances by means of liturgies and of emergency contributions. The ancient writers and, especially the fourth century orators, emphasized the role of the wealthy Athenians in the structure of the *polis*. Their statements often reflect the established concept that the wealthy Athenians were to contribute to the expenses of war and of Athenian democracy by means of *choregiai*, trierarchy and other contributions to state finances. It is true that Athenian democracy institutionalised new economic practices to take advantage of the rich citizens for the benefit of the whole city (*Old Oligarch* 1.13).<sup>79</sup> This cardinal feature of democracy is reflected in Aristotle's definition of democracy, according to which 'in democracy the government is in the hands of those who do not possess much property, but are poor, and the poor being many in numbers hold the offices' (*Polit.* 1279b 5-6). The special tax of the *eisphora* was intended to finance war expenses and was levied at times when the ordinary direct tax and the state resources were inadequate to meet extraordinary expenses. Thus it was levied on those Athenian residents who were liable to taxation.

Moreover, some writers like Xenophon argued from the perspective of the wealthy landowner, that is, from an aristocratic viewpoint. Therefore the contribution of the aristocrats to the city during the war was praised. Similarly, most of the orators argued from the point of view of the wealthy citizen or metic, who emphasized his

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<sup>79</sup> The contributions of the wealthy citizens to the needs of the people (the *demos*) have an aristocratic flavour. It was the aristocrats who entertained the people in many ways. For instance, Cimon used to 'furnish a dinner every day to any Athenian who wanted it, give clothes to elderly people, remove the fences from his estates that whosoever wished might pick the fruit' (Plut. *Per.* IX 2). See Ober (1989) ch. v. Also, in Sparta the rich men had obligations towards the masses. For example, they sometimes provided wheaten bread at the public messes (Xen. *Lac. Pol.* V 3)

contributions to the people in order to be granted *charis* (e.g. Isocr. 18.58, Lys. 25.13, Lys.9).<sup>80</sup>

Most of the evidence for the *eisphora* tax comes from the fourth century. At that time the polarization between well-to-do and 'have-nots' citizens became very sharp as a result of the economic and social effects of the Peloponnesian War and the sequence of Greek wars afterwards.<sup>81</sup> During the Peloponnesian War and later in the Corinthian War a new category of rich, a sort of nouveaux riches, emerged (Thuc. 2.53.1, Lys. 19. 15-7, Ar. *Rhet.* 1387a 8).<sup>82</sup> First, the Peloponnesian War and then the Greek wars in the first half of the fourth century gave impetus to new sources of personal wealth and allowed the development of a set of economic occupations. The new rich were willing to perform liturgies in order to establish their status and display their wealth, often undertaking extravagant expenditure. Thus the role of the upper class in the economy of Athens in the fourth century is emphasized by Greek writers.

In conclusion, the *eisphora* was a tax on the property of the rich residents of Athens which was intended for war expenditure. The revenue of 200 T from the *eisphora* of 428 BC was the product of the contributions of the rich Athenians. The payers of this tax were not confined to the liturgical class. The impression that the *eisphora* payers are to be identified with the liturgical class is a misleading one, produced by a bias in our literary sources, where the contribution of the wealthiest Athenians to the state finances is emphasized.

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<sup>80</sup> See Davies (1981) pp. 92-95.

<sup>81</sup> See Hansen (1991) pp. 115-116.

<sup>82</sup> See Davies (1981) pp. 70 ff.

Were the *eisphora* payments a big burden for the Athenians during the Peloponnesian War? There was discontent among the Athenians because of the *eisphora* tax.<sup>83</sup> According to Diodorus (XIII 64.4), the Athenian generals ravaged the territory of the enemy because 'they wished to relieve the Athenian people of the property-taxes' (*eisphoron*) (also XIII 47.7). The same sense of discontent is implied by Thucydides' account of the imposition of oligarchy in Athens (VIII 53). The tribute assessment of 425/4 BC was intended to increase levels of tribute payment. Undoubtedly, the revenues from tribute exceeded the 200 T collected from the *eisphora* tax. At that time the Athenians were able to retrieve tribute from their allies. However, the large increase in tribute payments in the assessment of 425/4 BC indicates that the Athenians were not willing to pay more the *eisphora* tax. Also, we know that the Peloponnesian War affected individual fortunes (Thuc. II 65.2, Andoc. 3.16). For example, the property of Callias had been reduced from 200 T to 2 T (Lys. 19.48).<sup>84</sup>

Thus the *eisphora* as a tax intended to increase war funds and imposed at war-time might have been a burden for the Athenians. Moreover, since it was a tax on property, changes in individual property (*timema*) might have affected the number and the status of people liable to the *eisphora* tax and other liturgies.<sup>85</sup> Finally, the reduction of the population of Athens during the war might have affected the number of the *eisphora* payers.

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<sup>83</sup> A general discontent of the rich Athenians for the revenues they had to pay to the state emerges from Xenophon *Symposium* (4.30-2). The speaker Charmides describes vividly the suffering of the rich Athenians because of their obligations to the state.

<sup>84</sup> The speaker in Lysias (26. 22) claims that his entire property, estimated 80 T in peace-time, was spent on war.

<sup>85</sup> The status of the liturgical class is well described by the *diadikasia* documents from the fourth century. These documents are informative about the property of the Athenians who were liable to certain liturgies, probably to *choregia*, *proeisphora* and *trierarchia*. See Davies (1981) Appendix I. Gabrielsen (1987) pp. 39-51.

To sum up. First, the *eisphora* was an effective financial measure because it produced the additional amount of 200 talents for the state revenues. The tax of the *eisphora* was levied several times during the Peloponnesian War. It was an emergency measure during the war at times when Athens faced financial crises.<sup>86</sup>

Second, the war demanded contributions of the Athenians to the war funds because the treasuries of the city and the imperial revenues were proved insufficient to finance the Peloponnesian War completely. Pericles claimed that money, in particular, reserves of money (*periousia*), and not emergency contributions of money (*biaiai eisphorai*), were to maintain the war (I 141.5). But the war itself proved Pericles' verdict wrong.

Third, the income from the *eisphora* was intended to meet war expenses and, in this sense, it was an emergency measure. But the practice of tax on property was not entirely new in the economy of Athens. For instance, at the time of the Peisistratids a fixed land tax was levied on the Athenians. During the Peloponnesian War pre-existing economic practices were adapted by Athens to cover the emergencies of the war. The system of the *eisphora* tax was developed during the fourth century and in the second half of the century became a regular annual tax of 10 talents a year (IG II<sup>2</sup> 244, ll. 12-13, 505 ll. 14-17).

Fourth, a tax levy on property of rich citizens and metics reflects a development in the Athenian economy. The property of the Athenians consisted not only of land but of

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<sup>86</sup> The *eisphora* was levied on the Athenians several times during the Corinthian War. For the period 395-386 BC four *eisphorai* are attested. Brun (1983) p. 23.

other assets which were, to some extent, liquid assets.<sup>87</sup> Metics did not own landed property (unless they had been granted *enktesis*), thus their property was mostly made up of liquid assets.<sup>88</sup> Thus the system of *eisphora* taxation was orientated to a monetary economy.

A second tax which was generated by the exigencies of the war was the *eikoste*. The *eikoste* was imposed upon Athens' subjects, replacing the tribute. It aimed at increasing the *polis* revenues. In Thucydides' history the *eikoste* is related to the financial difficulties that Athens faced after the Sicilian expedition and the fortification of Deceleia (VI 28.4). It is disputed whether the tax of the *eikoste* replaced tribute until the end of the war. On the evidence of Xenophon (*Hell.* I 3.9) who states that in 410 BC the Chalcedonians agreed to pay to the Athenians 'the tribute they had been accustomed to pay', it has been argued that the *eikoste* was replaced by tribute some time in 410. The authors of the *ATL* maintain that tribute was resumed on the evidence of some fragments associated with a last assessment in 410 BC.<sup>89</sup>

What was the principle behind this particular fiscal policy? Undoubtedly, Athens faced a financial crisis after the Sicilian expedition and the Spartan occupation of Deceleia, but not bankruptcy and thus maintained the war successfully for several more years. Hence the *eikoste* was a measure which the Athenians employed for alleviating the economic crisis. The collection of the tribute was subject to certain

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<sup>87</sup> In the *antidosis* procedure in the fourth century the property of individuals is described as land and real estate. Also, property consisted of agricultural production, slaves and other valuables (Dem. 42.1, *IG* I 254 ll.5-6). See Gabrielsen (1987) pp. 1-38.

<sup>88</sup> Probably the mining concessions leased from the state were exempted from the assessment of the *timema*. This is certain for the *timema* of the metics, for they were not engaged in leasing silver mines, as emerges from the *Poletai* records. See De Ste Croix (1953) pp. 30-70.

<sup>89</sup> See Meiggs (1972) pp. 438-439, Rhodes (1993) p. 33. Contrary Mattingly (1996) pp. 205-208.

irregularities such as delays or denial of payment by discontented allies, as emerges from the tribute lists (also *Old Oligarch* 3.5).<sup>90</sup> Moreover, despite the fixed amounts of tribute imposed by the Athenians on their allies, sometimes the cities were unable to meet their obligations because of internal financial problems. For example, the people of Samothrace complained that they were not able to pay their tribute because of the unproductive land they inhabited (Antiphon *On the tribute of the Samothracians* Fr. 50). Hence the new practice of the *eikoste* might have worked towards the direct collection of money. Also, it might have been a response to irregularities in tribute collection. A tax on sea-borne trade might have also resulted in a regular flow of cash in Athens.

Did the Athenians secure a regular revenue by imposing the tax of the *eikoste*? We know that in Athens the *poletai* sell the right to collect the taxes through public auction (Ar. *Ath. Pol.* 47).<sup>91</sup> In this way, a contract between the *polis* and the tax-farmer was concluded. The tax-farmer had the obligation in most of the contracts to pay a *προκαταβολή* (down payment) to the state. Thus we can assume that Athens through the procedure of tax-farming secured, to some extent, its revenues from the *eikoste* tax. Moreover, if the *eikoste* tax was collected through tax collecting concessions, then a sequence of additional financial transactions would take place such as the payment of the auctioneer (κῆρυξ) and the sale tax (ἐπώνιον). These payments might have been deposited in state treasuries.

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<sup>90</sup> Kallet-Marx (1993) p. 194 argues for 'the declining reliability and importance of tribute as a form of revenue' from a period as early as 428 BC, when the *eisphora* was levied. The argument is mainly based on the Athenian decree regulating the tribute assessment of 425/4 BC (*IG I* <sup>3</sup> 71).

<sup>91</sup> For example, the council was responsible of selling the *pornikon telos* (Aeschines 1.119). The Athenian law for the tax on grain from the islands of Lemnos, Imbros and Skyros offers a good example of the procedure (esp. ll. 8-14). It was the *priamenoι* (the individual tax farmers) who were to convey the grain from the islands to the Piraeus. See Stroud (1998) on ll. 8-10, 10-14. For public auctions see Langdon (1994) pp. 253-265.

However, such a tax on imports and exports by sea would have resulted in a substantial revenue only if trade was effectively conducted by the cities during the war. Trade of various sorts was carried on during the Peloponnesian War. In Thucydides' history we find cargo ships operating sea-borne trade during the war (e.g. IV 118. 5, VI 31). Similarly, Xenophon provides evidence that grain-ships were sailing in to the Piraeus during the war (e.g., I 1. 35-6). The war and the needs of the Greek armies demanded a new model of trade and hence cargo ships and traders accompanied armies (e.g. during the Sicilian expedition). Moreover, trade and, particularly, the grain trade was vital for the Greek cities since many of them relied heavily on imported grain. For example, Teos was dependent on imported grain. In an inscription from Teos dated to *ca.* 470 BC we find curses invoked against those who prevent the import of corn or re-export it (ML 30=Fornara 63, ll 6-12). Athens itself was the greatest importer of grain in the classical era (Dem. 20.31.1).<sup>92</sup> During the Peloponnesian War Athens was dependent on grain import from Euboea which served as a granary for Athens (Ar. *Wasps* l. 715, Thuc. VII 28.1, VIII 4, 96.2). Thus the loss of Euboea was a disaster for the Athenians similar to that in Sicily (Thuc. VIII 96).<sup>93</sup> Also, the long war between the Greek cities increased the need for grain imports, since in many cities the harvest of crops was seriously affected by hostilities (e.g. Xen. *Hell.* V 4.56). During the Peloponnesian War the belligerents attempted to blockade the importation of commodities into the enemies' cities (e.g. Thuc. III 86.4,

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<sup>92</sup> Thus the 'grain supply' was regularly discussed in the Athenian Assembly (Ar. *Ath. Pol.* 43.4) and it was a subject of political oratory (Ar. *Rhet.* 1359b 19-22). A law forbade the corn dealers to buy more than 50 *formoi* of grain probably to prevent hoarding (Dem. 22. 6). See Seager (1996) p. 172. Garnsey (1985) pp. 62-75 challenges the assumption of the total dependence of Athens on imported grain.

<sup>93</sup> See Kagan (2003) pp. 396-398.

VIII 35.2, *Hell.* II 1.17). But the war did not stop trade activities in the Aegean, because sea-borne trade was essential for the subsistence of many Greek cities.<sup>94</sup>

The imposition of the *eikoste* was possibly related to the dissatisfaction felt by allies because of the tribute they paid to Athens and of the tyranny of the Athenian *arche*. Therefore Athens, in an effort to avoid revolts of its allies, employed a new method for collecting imperial revenues. The tax of the *eikoste* was fitted better to the economic practices employed by the Greek cities and the 'laws' of trade than was the tribute system. Market taxes were common in the economy of the Greek cities (e.g. the tithe-duty on vessels sailing out of the Pontus (Xen. *Hell.* IV 8.27). Andocides (1.133) refers to 2% custom duty in the post-war Athens farmed by Aggyrrhius (also attested in Dem. 34.7, 35.29). In the *Old Oligarch* (1.17) there is mention of one per cent tax in the Piraeus (also Ar. *Wasps* l. 658: *limenas*). It is possible that a five per cent tax on sea-borne trade was collected at the harbours of the empire from agents outside the empire at earlier periods (Ar. *Frogs* 362-3). In the honorary decree of Neapolis in Thrace (ML 89, ll. 26-7) certain monies, which came from the harbour of Neapolis, are mentioned, implying probably a tax on cargoes.<sup>95</sup> In the Athenian decree which honours Phanosthenes we find the clause that those who imported ship's oars would be exempted from the 1% tax.<sup>96</sup> We cannot exclude the possibility that a one per cent tax was levied on the cities in the Aegean before the imposition of the *eikoste* (Ar. *Wasps* l. 658, [Xen] *Ath. Pol.* 1.17). Therefore the tax of the *eikoste* was

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<sup>94</sup> Much commercial activity took place at the harbour of the Piraeus in the fifth and fourth centuries, despite the sequence of wars. Xenophon (*Hell.* V 1.22-3) offers a vivid picture of the activities at the Piraeus at the time of the Corinthian war. The harbour was full of merchant ships and triremes. Vessels with grain cargos were sailing in to the Piraeus. Also, fishing ships and ferry-boats sailing in from the islands operated there. Merchants and *naukleroi* operated trading businesses at the Piraeus.

<sup>95</sup> A law from Cyparissia from a later period (4<sup>th</sup> or 3<sup>rd</sup> c.) regulated the duties on imports and exports (*SEG XI* 1026). The duties imposed on the import of goods to, or export from Cyparissia was the one-fiftieth of the value of the goods. Arnaoutoglou (1998) no. 39.

<sup>96</sup> See Macdonald (1981) pp. 141-6.



rooted in the established practice of harbour tax but, under the pressure of the emergencies of the war, it was used as an emergency policy aiming at a significant increase of revenues and at assets in cash. The tax of the *eikoste* did not produce the expected increase in state revenues and thus the Athenians reimposed the tribute payments on their allies.

A different interpretation is offered by Kallet (2001) ch. 1. In her view, the imposition of the *eikoste* was a radical reorientation of the Athenian *arche*. The decision of the Athenians to abolish tribute entirely and impose the *eikoste* was a mark of a development in their *arche*: 'the Athenians were willingly eliminating a primary signifier of their political hold over the allies and restructuring the fiscal administration of the *arche* to be a more effective revenue-generating instrument'. Thus Athens replaced the tribute system with the *eikoste* in the last years of the Peloponnesian War until the collapse of its *arche*.

However, in 413 BC Athens still maintained its *arche*. The tribute revenues were the core of an empire. Athens had no reason to abandon the system of tribute payment when it was able to maintain its *arche*. Tribute was important for the economy of the Persian Empire. When Sparta founded its *arche*, tribute payments from the Greek cities became a source of its revenues. In the second Athenian Confederacy founded in 378/7 BC (Tod 123=Rhodes-Osborne 22) the allied cities were not to pay tribute (*phoros*) but to contribute voluntarily to the treasury of the league (*syntaxeis*). However, the 'contributions' of the charter of the league functioned, to a great degree, as tribute payments. In an Athenian inscription referring to an alliance between Athens and the Thracian kings (Tod 151) there is the provision that the Thracian kings

were to enforce the payment of tribute by the Thracian cities tributary to Athens (1.8). In general, the tribute system was profitable for an *arche*, and the Athenians as soon as they were able to re-establish their *arche* profited from imperial revenues. Also, the revenues from a harbour tax, although as high as 5% did not in fact exceed the tribute revenues. Thus the 5% tax was an effective means for Athens to extract revenues from the allies as a way of overcoming the increasing fiscal difficulties due to 'the two wars'. The *eikoste* was an emergency fiscal policy rather than a sign that the Athenians were restructuring the fiscal administration of the *arche*.

A similar principle was behind the imposition of a tax of ten per cent on all goods passing out the Bosphorus. In 410 BC the Athenians established a custom house (*dekateuterion*) in Chrysopolis in order to collect a tithe-duty from vessels sailing out of the Pontus (*Hell.* I 1. 22, Polyb. 4.44.4).<sup>97</sup> We said that the collection of 10% tax was one of the *polis* institutionalised sources of revenues.<sup>98</sup> Although the initiative taken by the Athenians was rooted in the economic system, which operated in Athens and in other Greek cities, the 10% tax was very high in comparison with the regular 2% or 2 ½ % levy on imports and exports.

As we argued earlier, the state through the *poletai* sells the right to collect the taxes. The founding of the *dekateuterion* at Chrysopolis probably aimed at collection of taxes on the spot and the money raised from the tax in cash might have directly funded the military operations of the Athenians. Thus we can say that the war affected, to some degree, the established economic policies of the Greek cities.

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<sup>97</sup> The tax of ten per cent on all goods passing out through the Bosphorus was still at work in 390 BC (*Hell.* IV.8.27, Dem. 20.30).

<sup>98</sup> A reference to money derived from ten per cent taxes is found in the Callias Decree A (l. 7). However, there is no indication that the ten per cent tax of the Callias Decree passed in peace-time served the same scope as that imposed by Alcibiades in 410 BC. ML p. 161.

The above argument about Athens' public finances and their management by the state in order for public expenses to be met, especially at the time of war, proves that the Greek *polis* had a concept of economics which resulted in sophisticated economic policies.

#### **4. Conclusions**

(I) The public economy of the Greek *polis* was organised around the treasuries of the gods. The treasuries of the gods functioned as the *polis* treasuries. In fact, they functioned as the *polis* 'banks' and the monies accumulated there were used to finance public expenditure.

(II) Although the public money of the cities was administered as money belonging to the gods, that is, sacred money, it was used for economic ends operating the economy of the *polis*.

(III) Wealth in the gods' treasuries was increased by employment of sheer and sometimes advanced economic practices as leasing of land or imposition of a tax. In this way, the Greek cities were able to build a substantial reserve to meet their expenses, especially when the flow of other resources was meagre.

(IV) Changes and developments occurred in the organization of the *polis* economy throughout time because of the exigencies of warfare and because of the monetization of the public economy to such a degree that economic crisis was felt as lack of liquid assets.

(V) The management of public finance was based on a rational system of economic practices which aimed at good management of financial resources, exploitation of various resources, successful handling of financial predicament and increase in *polis* finances. In this way, a set of standard economic practices had been developed by the Greek cities while emergency economic measures were taken when necessary.

## CHAPTER TWO

### *Greek coinage and the polis economy*

#### **1. Introduction**

Greek coinage tells us about the ramifications of the Greek economy. By studying Greek coinage we hope to learn about the economic practices employed by the Greek cities in order to manage public finance and to fund state expenditure. Also, we hope to understand better the procedure of monetization of the Greek economy. Moreover, we hope to understand whether the Greek economy was a rational and autonomous factor in the structure of the Greek *polis* and whether the Greeks had a concept of economy.

In this chapter I study Greek coinage from the archaic period to the early fourth century and, more specifically, the coinage of the most important Greek city-states in Greece proper and Asia Minor. I, first, introduce the main aspects of Greek coinage, that is, hoards, standards, denominations, coin-types and circulation of Greek coinage in order to explain its economic and political ‘behaviour’ and also certain categories of Greek coinage in order to understand whether Greek coinage functioned only within the organization of the *polis* or beyond this. Moreover, this chapter sets out to explore the following topics. First, certain *polis* decrees which are related to coinage. Second, how did the Athenian *arche* affect the coinage of the Greek cities. Third, certain emergency issues in order to understand economic practices employed by the

cities, in particular, at times of economic crisis. The study of the above topics will assist in understanding what the Greek historians achieved to understand about the *polis* economy and also their shortcomings. For, in their *Histories* they deal with the economics of Greek warfare, with the *polis* institutions, with the *polis* economic practices, with emergency measures taken due to war exigencies and with the imposition of an *arche* on the Greek world.

## **2. Hoards, standards, denominations, coin-types, federal and festival coinage**

Considering hoards, standards and denominations of the coinage of certain Greek cities, we can draw conclusions about the circulation of certain issues, their economic orientation, the influence that international currencies had on certain mints and how trade and the monetisation of the public economy of the *polis* did influence the coinage of the Greek cities.

How far did Greek coinage travel? Here we discuss the hoard evidence of the coinage of Athens, Aegina and Corinth and we emphasize certain peculiarities.

The archaic coinage of Athens, that is, the ‘Wappenmünzen’ and the archaic owls,<sup>99</sup> is found in hoards in Athens (*IGCH* 2, 12), in the neighbouring region (*IGCH* 3, 9, 10, 5), in Asia Minor (*IGCH* 1165, 1172, 1177), in Egypt (*IGCH* 1638, 1639, 1640), in

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<sup>99</sup> The coinage of the ‘Wappenmünzen’ might have started around the middle of the sixth century at the time of Peisistratus’ tyranny. The minting of the archaic ‘owls’ commenced *ca.* 515 BC. The end of the series of the archaic ‘owls’ has been placed around 470 BC (Starr Gr.I, Gr.II, dated towards the end of 470s, has been considered as a transitional stage from the earlier to the later ‘owls’). The accepted above dates are relatively low in comparison with much higher proposed dates. Seltman’s dating of the archaic owls has been considered as very early and changes in his arrangement have been proposed. Kraay *NC* 26 (1956) pp. 43–48 argues, on the evidence of the overstrike of a primitive looking stater of Cyrene upon an owl of Gr.H, that the early owl series begins with Seltman’s Gr.H, dated in the last quarter of the sixth century (*ca.* 527–510) and ceased with Gr. N with the type of wreathed Athena *ca.* 479 BC.

Italy (*IGCH* 1874) and in Sicily (*IGCH* 2065, 2066). Early Athenian coinage is well represented in the Asyut hoard.<sup>100</sup> The evidence of hoards supports the circulation of the archaic coinage of Athens in a wide area. In archaic hoards the representation of Attic coins is high. For instance, in the Gela Hoard (burial *ca.* 485), Athenian coins, which are the only non-Sicilian coins, numbered 166 tetradrachms out of the total of 1,076 coins.

The coinage of Athens, minted after the Persian Wars to the end of the fifth century, had widely circulated. A large number of hoards, distributed to a wide geographical area, contain Athenian owls. However, Athenian coins are not found in hoards in Peloponnesus. Athenian coins are represented only in one hoard in Macedonia (Mt Athos, 362). But Athenian coinage is well represented in hoards in Asia Minor (*IGCH* 1182, 1227, 1252, 1254, 1255, 1256, 1259). The largest number of Athenian coins is concentrated in the region of Cilicia, e.g. 200 tetradrachms are found in a hoard, which consists of double-sigloi (*IGCH* 1255). Hoards, found in the Levant, contain a considerable number of Athenian tetradrachms along with local imitations (*IGCH* 1482, 1484, 1487, 1488, 1489, 1490, 1491). Many fifth century Athenian tetradrachms were deposited in hoards in Egypt (sometimes together with fourth century tetradrachms) (*IGCH* 1649, 1651, 1652, 1657, 1656). Athenian tetradrachms are found in Sicilian hoards, buried in a period from 475 down to 390 (*IGCH* 2071, 2089, 2092, 2095, 2103, 2113, 2114, 2117), but their representation is relatively modest (it varies from 3 4dr. to 19 4dr.).<sup>101</sup> In the Decadrachm hoard Athenian coinage is represented with 187 coins which make up the 11% of the volume of the

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<sup>100</sup> Price, Waggoner (1975).

<sup>101</sup> We may expect a better representation of Athenian coinage in the Sicilian hoards, since Athens undertook many expeditions there. However, there are overstrikes on Athenian coins by the mint of Rhegion and Messana *ca.* 440s BC. See Rutter in *Kraay-Mørkholm Essays* pp. 244-254

coins in the hoard.<sup>102</sup> In most of the hoards Athenian coinage is represented only by tetradrachms. Only in Athens and in the vicinity of Attica fractions are found. This is because heavy coins travelled a long distance. Also, coins of large denominations were desirable for hoarding.

None of the hoards, archaic or classical, come from the region of Thrace-Euxine-Black Sea. But if Athens was dependent, to a considerable degree, on grain imports from the North, as it has been often maintained, then Athenian coinage might have been found in the area. Does the hoard evidence challenge the usual view of the large-scale grain imports from the North to Athens?

Let us start with the archaic coinage. The volume of Athenian pottery, found especially in the area of the Black Sea dated from the second half of the sixth century BC, indicates that there was trade between Athens and cities in the area.<sup>103</sup> We can assume that liquid money was not the means of exchange in the archaic period (probably Athenian pottery was exchanged for grain).<sup>104</sup> Also, on the hoard evidence we can assume that in the archaic period the grain trade between Athens and the cities in the Hellespontine-Euxine-Black Sea area operated on a more moderate scale than is usually assumed and only from the last quarter of the fifth century onwards it became plentiful (and thus Demosthenes' statement that most of the grain come from the Pontic area (20.31)). This would be explained by the fact that in many cities in the area only members of the ruling families were engaged in trading business with Athenians, as emerges from certain honorary decrees. In many of these cities ruling

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<sup>102</sup> See Fried (1987) pp. 1-20

<sup>103</sup> Herodotus in his excursus on Scythia notes the agricultural production of the area as well the cultivation of grain for sale (IV 17).

<sup>104</sup> See Noonan *AJP* (1973) pp. 231-242.



dynasties arise to power in the second half of the fifth century, e.g. the dynasty of Spartocids of the Bosporan kingdom ruled from a period around 438 BC.

A reasonable explanation would be that by the end of the fifth century to the beginning of the fourth the system of trade in Athens was considerably improved in order for individuals to be protected from the high risks of sailing into dangerous seas and for the state to secure grain supplies for the Athenian citizens (see bottomry loans and maritime trials). But fourth century Athenian coinage is found in a small number of hoards, compared to fifth century coinage, and its representation is modest.

The strongest argument is that the coinage of Cyzicus, which commenced in an early period and was established as an international currency from an early period and during the classical period, was extensively used in transactions taking place in the area of the Euxine. In all the hoards, which come from this area, buried from 450 to mid fourth century, the only foreign currency, which appears along with the local issues of Olbia or Panticapeum, is staters of Cyzicus (*IGCH* 1002, 1011, 1012, 1013). In addition, staters of Cyzicus were in an extensive use at the marketplace in Athens and were also found in individuals' chests, as emerges from financial records (e.g. the building accounts of the Parthenon published in 434/3 BC (Fornara 120)) and fourth century orators (e.g. Lysias XXXII 6: 300 staters of Cyzicus were left as inheritance).<sup>105</sup> The high acceptability of Cyzicene staters in Athens becomes evident

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<sup>105</sup> Local issues (e.g. issues of Olbia which seem to be predominant currency in the area on the hoards evidence (28 hoards out of 42, dated from late sixth century to mid fourth century)) might have supplemented the Cyzicene staters at trading, since the excavations in the Athenian Agora brought to light large bronzes from Olbia in the Black Sea, dated to the fourth century.

from the Tribute List of 454/3 BC (postscript ll. 6-12), since part of the *aparchai* was tendered in staters of Cyzicus.<sup>106</sup>

The coinage of Aegina was predominant currency in the archaic period.<sup>107</sup> Thirteen hoards, archaic and classical, found in Greece contain Aeginetan turtles. More specifically, the Matala hoard (*IGCH* 1), buried very early *ca.* 550-25 BC, consists almost exclusively of Aeginetan staters. In the Cyclades hoards (6, 7, burial *ca.* 500, 500-490 BC) the representation of the Aeginetan staters is impressive. The early classical hoard from Cyclades (*CH* 2, 24) consists only of staters of Aegina.<sup>108</sup> The majority of hoards in Peloponnesus contain a considerable number of Aeginetan staters (*IGCH*, 28 (burial 450-400), 30 (burial 425-400), 35 (burial fifth century), 36 (burial fifth century), 40 (burial late fifth century), 44 (burial *ca.* 400), 60 (burial *ca.* 350)). The presence of the Aeginetan staters in Peloponnesus was probably related to the fact that the coinage of Aegina was the coinage of Peloponnesus (Hesychius s.v. *chelone*, Pollux 9.74). Many Aeginetan staters are found in a hoard in Thessaly (*IGCH* 62, burial *ca.* 350). Most of the Aeginetan staters appear in hoards buried in an early time (*ca.* 500-425) and then in later hoards (buried *ca.* 350). In a fourth century hoard (*CH* I 25) few fourth century 'tortoises' were buried with archaic issues. This can be explained as the result of the capacity of the mint of Aegina and the degree of acceptability of the Aeginetan stater at different times.

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<sup>106</sup> See Figueira (1998) pp. 274-275, Eddy (1973) pp. 47-70.

<sup>107</sup> In antiquity the beginning of the coinage of Aegina was connected with Pheidon of Argos (Strabo VIII 6.16, VIII 3.33, Hdt VI 127, Ephorus *FGrH* 70 f 115). Regardless of mythology, the coinage of Aegina began in an early period. Brown (*NC* 10 (1950)) placed its beginning in a period around 600 BC (640-590 BC). In Holloway's classification (*MN* 17 (1971)) a lower date has been accepted, that is, not before the first decade of the sixth century. On the evidence of the Asyut hoard, the beginning of the Aeginetan coinage has been placed much later, *ca.* 550-530/25 BC). See Price, Waggoner (1975).

<sup>108</sup> See Sheedy (1987) pp. 107-117.

Aeginetan coins are not found in hoards in the North. Their representation in hoards in Asia Minor is small (*IGCH* 1177, 1185, 1252). However, Aeginetan staters are found in the Levant (*IGCH* 1482, 1483). They are plentiful in hoards in Egypt (*IGCH* 1636, 1637, 1639, 1640, 1645, 1646, 1647, 1650, 1652). Aeginetan coins travelled to the East (*IGCH* 1747, 1789, 1790, 1830). The Taranto hoard (1874, burial *ca.* 508) in Italy contains 15 staters of Aegina. This is the only one representation of Aeginetan coinage in hoards in the West.

In the Decadrachm hoard Aeginetan staters are found. But their representation is extremely low in comparison with the 187 Athenian tetradrachms which the hoard contains. This indicates that the Athenian coinage replaced the staters of Aegina at the time of burial. The Asyut hoard contains 133 Aeginetan staters. The issues in the hoard represent the archaic coinage of Aegina from a very early period at the beginning of the sixth century to *ca.* 470 BC. The hoard from Anatolia (burial *ca.* 480) needs a special reference. The hoard does not contain bullion but there is a chisel-cut on most of the coins (with the exception of the coins of Acanthus, Corinth and Aegina). This indicates that up to that time fineness of metal was still the main concern in regard to coinage. The Aeginetan staters (Robinson nos. 23-32 and one 'Pseudaeginetica' no. 33) made the 20% of the coinage in the hoard (a lower figure of that of 50% of the coins of Athens).<sup>109</sup> The coins in the hoard are issues of an early time of the Aeginetan mint (*ca.* 500-480). Therefore the coinage of Aegina was an established currency in an early time.

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<sup>109</sup> Robinson (1961) pp. 107-117.

The accumulation of large coins, that is, staters in hoards spread to an area from the Aegean to the East and to Egypt is evidence for a network of commercial exchanges assumed by Aeginetan traders (and pirates) in an early period.<sup>110</sup> The archaic and early classical coinage of Aegina was minted to serve mostly commercial objectives. Thus any monetization of the economy of Aegina was to be found in a wide trade, taken up by Aeginetan traders and pirates. The coinage that Aegina resumed after the end of the Peloponnesian War was on a modest scale and it is modestly represented in hoards. For the aim of fourth century coinage was, to a certain degree, different from that of the fifth century. In the fourth century the coinage of Aegina aimed at financial needs within the city's monetary economy while the archaic coinage was intended for international commercial exchanges.

The representation of the Corinthian 'colts' (Pollux IX 6.76: πῶλοι) in hoards found in Greece is meagre. Corinthian staters were found in Corinth and in the vicinity in Peloponnesus. In hoards from Asia Minor Corinthian coins are absent (only one stater in *IGCH* 1254 and in *IGCH* 1177). In hoards from Egypt, buried in a period between *ca.* 500 and 470) the representation of the Corinthian staters is quite substantial (*IGCH* 1636, 1637, 1638, 1639, 1644, 1645). Corinthian coins are found in hoards, buried from the early time of *ca.* 520 down to the middle fourth century, in Italy (*IGCH* 1872, 1974, 1908, 1910, 1916). Corinthian 'Pegasoi' were buried in the hoards along with 'Pegasoi' of the mints of Corinth's colonies. In the Sicilian hoards buried after 350 BC a considerable number of coins of Corinth are found together with coins of its western colonies (*IGCH* 2130, 2131, 2132, 2133, 2135, 2136). In the hoards in Sicily the Corinthian 'Pegasoi' are the dominant currency. For instance, in the

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<sup>110</sup> The prosperity of the island in the archaic and early classical period is attested by the number of the Aeginetan victories at the Panhellenic Games (e.g. Pindar *Pyth.* 8, *Nem.* 3, 4, 5, 6, 7, 8, *Isth.* 5, 6, 8, *Olymp.* 8).

Leonforte hoard (2133, burial *ca.* 330-320), 159 coins come from Corinth's mint out of 327 coins in total. This might have been related to the expedition of Timoleon to Sicily in 344 BC. In general, the ample circulation of the Corinthian 'colts' in Sicily in the late fourth century was the outcome of the military and economic dominance of Corinth on the island and its traditional commercial orientation to the West.

From the evidence of hoards the circulation of the Corinthian coinage seems to be on a moderate scale, especially in comparison to the coinage of Aegina and Athens. It comes as a surprise considering that Corinth operated a substantial sea-borne trade from an early period, as archaeological finds of Corinthian pottery and Herodotus' and Thucydides' view of early Corinthian naval power (see ch. 4) indicate. But the climax of Corinth's international commerce was large in the archaic period when coinage was not assumed by any mint in Greece proper. Thus the introduction of coinage in Corinth some time at the beginning of the sixth century (in the last years of Periander's tyranny which ended in 587 BC) was not the result of a large-scale trade conducted by the city. However, in the period from the Cypselids' tyranny until the end of the sixth century many major constructions took place in the city such as the construction of the artificial harbour of Lechaëum *ca.* 600 BC and the construction of the *diolkos*. The construction works gradually resulted in the use of coined money for the purchase of material supplies and for the pay of craftsmen.<sup>111</sup> Some payments may have been made in foreign currencies, since at the excavations at Corinth coins of

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<sup>111</sup> Herodotus made a peculiar comment that in Corinth the craftsmen were not despised as much as in other Greek cities (II 167).

many cities have been unearthed.<sup>112</sup> Foreign currencies were in circulation along with the civic coinage in most of the Greek cities, e.g. Athens and Thessaly.<sup>113</sup>

Limited circulation of the archaic Corinthian coinage shows that early Corinthian coinage operated other exigencies rather than international commerce, which the archaic Aeginetan coinage operated. Moreover, in the fifth century the Athenian pottery trade had already overtaken the Corinthian.<sup>114</sup>

Furthermore, the coinage of the colonies of Corinth on the same pattern of the Corinthian coinage created a degree of uniformity at international markets and, probably Corinthian 'Pegasoi' and the 'Pegasoi', for instance, of Leucas, were used as indistinguishable issues.<sup>115</sup> Therefore the scanty hoard evidence is not a decisive factor in concluding that, despite the economic prosperity of Corinth, its coinage was unimportant in international transactions.

This leads to a further observation. The first coinage of the Greek *poleis* was not merely the outcome of the rationales imposed by trade, as it has been extensively argued. It was initiated by the civic life of the *polis* and was meant to meet the fiscal

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<sup>112</sup> See Williams and Fisher (1971).

<sup>113</sup> The hoards found in Thessaly contain a variety of currencies. For instance, in the Tricala hoard (IGCH 21, burial *ca.* 450) Thessalian coins are found along with staters of Aegina and one stater of Chios.

<sup>114</sup> In addition, excavations in Corinth showed that a large volume of Attic pottery was imported in Corinth during the fifth century, which was continuous even during the Peloponnesian War. See McDonald (1982) pp. 113-123.

<sup>115</sup> Leucas issued 'Pegasoi' with the initial Λ or the full name ΑΕΥΚΑΔΙΩΝ. The coins of Leucas had travelled as far as the Corinthian 'colts'. Likewise, the coinage of Ambracia belonged to Corinthian currency and was continuous during the fifth and the fourth centuries. Before the civic mint assuming coinage, 'Pegasoi' of Corinth were in use in Ambracia. See Ravel (1928). Similarly, the coinage of the colonies of Corinth in the North-West, that is, of Anactorium, Potidaea and Epidamnus were modelled on the Corinthian 'Pegasoi' with the initial of each city on the reverse. See Graham (1983) ch. VII esp. p. 137ff, Kagan (1988) pp. 163-173. The only exception to the above pattern is the coinage of Corcyra. The weight adopted for the Corcyrean stater of 11.6 gm is peculiar but it was equivalent to four Corinthian drachmae and to two-thirds of the Euboeic stater.

exchanges taking place within the city. In my view, coinage was an 'internal' phenomenon of the city-state, which became gradually an effective means for the city to meet 'external' factors such as trade and foreign policy, which are vital for the maintenance of the *polis per se*.

Now about the standards that several Greek cities employed. The standards employed by a city and the denominations of its coinage were in relation to those of other cities with which the city was either in political or economic interaction. The coinage of Athens was based on a drachma of Euboeic-Attic weight (*ca.* 4.3 gm) from the archaic until the Hellenistic era. The 'Wappenmünzen' issue was assimilated in division to the Aeginetan system and in weight to the Euboeic standard. Thus the 'Wappenmünzen' didrachm was at the same weight with the contemporary Corinthian staters (3drs) whereas they have the same subdivisions with the heavier staters of Aegina (2dr).<sup>116</sup>

The main denomination of Corinthian coinage was the stater (8.6 gm) which was equivalent to two Attic drachmae. A wide range of denominations were minted in Corinth, that is, drachma (or trite because one stater was equivalent to 3 drachmae of 2.9 gm), hemidrachm, diobol, obol, trihemibol and hemibol. A very unusual denomination, that is, the trihemidrachm (or half stater) was issued, probably at the outset of the Peloponnesian War.<sup>117</sup> The weight of the trihemidrachm made it a convenient equivalent to the Aeginetan stater, which dominated the currencies of Peloponnesus.

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<sup>116</sup> The 'Wappenmünzen' show a great similarity to the contemporary coinage of other cities in the region, i.e. the Eretrian. See Wallace (1968) pp. 23-42.

<sup>117</sup> The representation of Bellerophon with Chimera on this particular issue might have been chosen as a symbolic reference to the new war which Corinth assumed. See Warren (1968) pp. 125-144.

The standards of a predominant currency were employed by many other cities. The stater of Aegina was a currency of high circulation and acceptability in the archaic period. Thus the Aeginetan standard was employed for the coinage of certain Greek cities. For example, the archaic coinage of the Cyclades islands was struck on the Aeginetan standard (Siphnos, Paros and Naxos). This indicates the predominance of the Aeginetan currency in overseas trade. It also indicates that the coinage of the islands was to be used as supplementary to the Aeginetan staters. In this way, the needs of a large-scale trade, delivered by the Aeginetans in the archaic period, were met. Similarly, the first coinage of Boeotia was struck on the Aeginetan standard. This particular standard can be explained as the result of the political relationship between Boeotia and Aegina (Pindar *Isthmian* 1, 4, 8, *Pythian* 6, 12) and because the Aeginetan standard was also employed by minting cities in the neighbouring area, especially in Thessaly. The autonomous coinage of Delphi was struck on the Aeginetan standard and thus many sums in the Delphian accounts are given in figures of Aeginetan currency (e.g. the accounts of the Delphian Naopoioi in 346-344 BC (*FD* III, 5 no. 23=Harding 84)).

In the fifth century Athenian coinage became a sort of international currency. The Attic standard therefore was employed by certain cities. For instance, the coinage of Siphnos in the Cyclades islands was struck on the Attic standard in the fifth century. Also, the coins of Delos with the lyre of Apollo and often with the initial Δ were struck on the same standard. This practice has been explained as consequence of Athenian influence on the island from the early time of Peisistratus' tyranny. Some of the islands of the Eastern Aegean employed the Attic standard. Period III (Barron) in the coinage of Samos consisted of coins in the Attic weight (Class IX) with the



tetradrachm as the largest piece. The coinage on Attic standard might have been issued in a period between 440/9 and 398/7 BC. However, although the islands were members of the Delian League, either as ship-providers or as tribute payers and Athens' allies during the Peloponnesian War, the Attic standard was not used by all mints. This indicates that the alliance with Athens did not affect the orientation of the commerce of the islands towards the East.

In the fourth century the Rhodian standard was employed by a considerable number of cities.<sup>118</sup> Most of the Aegean inlands and the cities in Asia Minor employed the Rhodian standard.

Some cities employed a variety of standards for their coinage at different times. More specifically, a range of standards was employed by the islands in Eastern Aegean. For instance, Samos employed different standards in different periods: Euboeic-Samian, Lydo-Milesian, 'heavy Samian' or Ephesian, Samian, Euboeic-Attic and Rhodian. The early issues attributed to Chios are electrum staters and silver didrachms struck on three different weight systems, that is, the Milesian, the Euboeic and the Chian. In the Period II of the early coinage of the island Milesian staters in electrum (*ca.* 14-14.11 gm) and Chian didrachms (*ca.* 7.86-7.86 gm) were struck. The first staters of Cos (16.90gm to 16.11 gm) were struck on the Persian standard and were triple sigloi (5.55gm . 3=16.65 gm).<sup>119</sup> The standards employed by the Aegean islands were in accordance with the standards of the cities in Asia Minor. This reflects the commercial relations of the islands with the Greek cities in the Asia Minor and with

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<sup>118</sup> See Ashton (2001) pp. 79-116.

<sup>119</sup> Barron pp. 75-89.

the Persian Empire. Furthermore, it is evidence for a sphere of common economic interests in the Eastern Aegean.

There is a great variety in the types of the first coinage of the Greek *poleis*. A great variety is found in the types of the 'Wappenmünzen'.<sup>120</sup> It seems likely that the types of the 'Wappenmünzen' were the signatures of the moneyers who were responsible for the minting of each of these series of the early Athenian coins.<sup>121</sup>

The variety of the types of the early electrum coinage of the Greek cities in Asia Minor is also impressive.<sup>122</sup> The variance of types stimulated a debate about the origins of these badges. It has been argued that the first coins had a personal character.<sup>123</sup> The coin-types indicated individuals, who were involved in the procedure of early coinage and were responsible for the official character of the new medium of transactions.<sup>124</sup> The personal character of the first electrum coins in Asia Minor does not detach coinage, at the stage of its 'invention', from the institutions of the city-states. Some very early electrum issues carried a badge, which was established as the badge of the civic coinage of a city throughout time. Civic coinage

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<sup>120</sup> Thus the 'Wappenmünzen' coinage has been connected with the festival of the Panathenaia. Also, the plethora of symbols has been considered as the emblems of aristocratic families at the time when aristocracy prevailed in the political scene of Athens. I do not think that the archaic coinage of Athens was connected with religious festivals because, first, Athens assumed its coinage to meet fiscal needs. Second, the Athenian economy was not based on the income from a particular festival, for example, on revenues from the Panathenaia. The Athenians propagandised their festivals, especially at the time of their *arche*. But it is unlikely that they issued their first coinage because they wanted to propagandise their civic festivals.

<sup>121</sup> See Kroll (1981) pp. 1-32, Kroll, Waggoner (1984) pp. 325-340.

<sup>122</sup> For example, a remarkable variety of types is found in the coinage of Cyzicus: Gorgoneion, Apollo, Dionysus, Centaur, Pegasus and Aphrodite. Finally, the tunny-fish became the badge of the civic coinage of Cyzicus.

<sup>123</sup> This personal character is probably reinforced by the evidence of the inscriptions 'I am the badge of Phanes' and 'Of Phanes' which are found in two early electrum coins attributed to Ephesus. Moreover, these inscriptions bear similarity with the first Greek inscriptions which, in their majority, demonstrated possession.

<sup>124</sup> It has been suggested that the personal badges were of merchants or bankers and also that they were the badges of rulers or officials. See Kraay (1976) p. 27, Wallace (1985) pp. 385-397.

in an early stage was characterised by a variety of types in order to establish its value and its acceptability over a wide area. Moreover, coinage as a new phenomenon required institutional establishment within the edifice of the *polis* and thus at the very beginning the role of individuals was important in coinage. When coinage was incorporated into the institutions of the *polis*, the state took over the important role of individuals.<sup>125</sup> By then officials had responsibility for minting.

Therefore moving towards the end of the fifth century and the beginning of the fourth the official character of the *polis* coinage was emphasized by the addition of names of magistrates. The fourth century coins of Corinth carried symbols and symbols together with letters on the reverse. In the Period IV of the Samian coinage (Barron, 398-365 BC) a great number of names of magistrates appear on coins. Names of magistrates were inscribed on the coins of Clazomenae, Colophon and Ephesus in the fourth century.

From the fifth century onwards a standardised type is found in the coinage of most of the Greek cities. The obverse type of the Corinthian coinage was Pegasus. The type of the reverse was standardised to the head of Athena in a Corinthian helmet. On the small denominations the reverse was occupied by an unhelmeted head identified as the head of Aphrodite.<sup>126</sup> The obverse type of the coinage of Cos was a nude youth, the so-called *discobolos*, related to the festival of Apollo at Triopion in Knidus (Hdt I 144) and the reverse type was a crab with the ethnic ΚΟΣ (rarely ΚΩΣ, ΚΩΙΟΝ).

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<sup>125</sup> In the same way, as we argue later, the role of individuals was important at the time of the constitution of the Athenian navy but then it became a state navy.

<sup>126</sup> Despite the conventional character of the coin-types, there is some variety in the execution of the types in different series. For instance, two exceptional dies, belonging to the second quarter of the fifth century, show Athena with short hair, providing a stylistic resemblance with the 'Cretan Boy'. Thus the conventionality of the Corinthian 'Pegasoi', although very close to that of the Athenian owls, demonstrates a degree of artistic evolution.

After the synoecism of Cos in 366/5 BC (Diod. 15.76.2, Strabo 657) the obverse type was a bearded head of Heracles wearing a lion skin.<sup>127</sup> After the synoecism of Rhodes in 408/7 BC, Rhodian coinage carries the head of Helios as obverse type and the nymph of Rhodes as reverse type. An amphora in front of a sphinx (sometimes with a wreath and the letters XIO) became the standard type of the coinage of Chios.<sup>128</sup>

The coinage of the cities in Asia Minor requires a further consideration. The first coins were electrum, struck early in the sixth century. The first evidence comes from the deposits of the Artemision at Ephesus. Out of 93 electrum coins, which were unearthed, a large number has been attributed to mints of Greek cities in Asia Minor (e.g. one coin with the seal's head (no. 8) has been attributed to Phocaea and another one (no. 10) to Ephesus). The rest are electrum coins of Lydia. Coinage in electrum was not assumed by mints in Greece proper.<sup>129</sup> The electrum coinage of the Ionian cities was connected with the electrum coinage, which was first issued in Lydia.<sup>130</sup> The first coinage in electrum has been explained in relation to the availability of electrum in the area (found on mount Tmolus and in the Pactolus and Hermus rivers).<sup>131</sup> The standards employed for the electrum coinage were the Phocaeic in the

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<sup>127</sup> The image of Heracles on the coins reveals a distinctive resemblance to the features of Mausolus. Mausolus had influence on the island (e.g. Mausolus' synoecism of Hallicarnassus). See Sherwin-White (1978) ch.6.

<sup>128</sup> See Boardman (1986) pp. 89-103. The silver coins, minted in *ca.* 430, carried an amphora of a new style with longer handles. This type represents the change from bulbous-necked to straight-necked Chian amphora, which occurred in late 430s. The final class of bulbous-necked amphoras shows an increase in capacity, which is an adjustment to the Attic chous. The new-style jars preserved the adjustment to the Attic system and thus the new jars with increased capacity were to hold 9 Chian or 8 Attic choes. See Mattingly (1981) pp. 78-86.

<sup>129</sup> Exceptionally there is an early issue of Athens (a sixth) and an electrum issue struck by Thebes (hemidrachm), dated from the end of the fifth century to the first decade of the fourth century.

<sup>130</sup> Despite the stress of ancient literature on the inventors of coinage (Pollux *Onom.* 9.83), the first coinage, issued in Lydia, was almost immediately succeeded by the electrum coinage of the cities in Ionia or both were the product of commercial and cultural interaction.

<sup>131</sup> Kraay (1976) p. 28.

North and the Milesian (or Phoenician) in the South. The largest coin was the stater divided into small fractions down into 'ninety-sixth' ('sixths', 'twelfths' and so on).

The first electrum coinage was followed by gold and silver issues. Again, this innovation towards a bimetallic currency has been attributed to the mint of Lydia (Hdt I 94). The Greek cities in Asia Minor replaced their early electrum coinage with silver and gold issues some time in the middle of the sixth century (only Phocaea issued electrum coinage until the fourth century along with silver coinage and bronze coinage on a small-scale in the fourth century). For example, the fourth century coinage of Lampsacus consisted of gold staters while bronze coins were issued, when the mint was under Orontas' authority. This new practice reveals that coinage, which was assumed at about the same time by cities in the East and in the West, was the product of a process of interaction. In the fourth century some cities issued bronze coins. For instance, Clazomenae and Miletus issued bronze coinage *ca.* 400 and *ca.* 375 BC respectively.<sup>132</sup>

The silver coinage of the cities in Asia Minor was struck on many standards. Let us give some examples. The fourth century silver hemidrachms of Phocaea were struck on the Attic standard. The fifth century silver coinage of Teos consisted of staters on the Aeginetan standard. In the fourth century gold issues were struck on Attic and Rhodian standards. The first silver coins of Miletus were issued on the Aeginetan standard. From the second quarter of the fifth century the silver coinage of the city

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<sup>132</sup> [Aristotle] (*Oecon.* 1348b) refers to fourth century coinage of Clazomenae. The city owed to a body of mercenaries the amount of 20 T. The city borrowed 20 T from the rich citizens and issued a fiduciary coinage of iron. In this way, the debt was paid off. The iron coinage was called in, when the civic revenues were redeemed. The large amount owed to the mercenaries implies a preceding period of large expenses, which probably explains the large but short-lived production of gold and silver issues. The economic practice given by Aristotle is an example of the economic 'behaviour' of coinage within the civic economy.

was issued in the Attic weight and in the fourth century on the Rhodian standard. In the fourth century the Rhodian standard was adopted for the silver coinage of Cyzicus.

The coins of the Ionian cities travelled mainly in the East. The East under Persian rule became a vast unified economic area with which the Greek states were in economic contact. The provinces of the Persian Empire were an ample economic zone for the economic interests of the Greek cities to be accomplished, since the economic strength, even of the most prosperous Greek city-states, was on a limited-scale in comparison with the Persian Empire.

The majority of the cities in Asia Minor minted in electrum, silver and bronze and employed different standards because, first, of the mineral riches of the area. Second, the geographical location of the Greek cities created a network of political and economic relations with the West and the East. Thus their coinage was intended for circulation and use in both areas. Their coinage therefore must have been compatible with the currencies circulating in the area. The silver coins were accepted in the silver-minting Western cities. At the same time, silver coins travelled to provinces of the Persian Empire, where Greek currencies as the Aeginetan stater or the Athenian tetradrachms were established as the predominant medium for transactions (e.g. in Egypt). The gold issues of the Greek cities in Asia Minor circulated in markets along with the gold darics. The exceptional electrum coinage, which some cities kept on minting together with silver and bronze, was due to the high acceptability and the reputation for its high value, which was established in international markets. Also, the adoption of a particular standard was the outcome of particular political and economic

exigencies. The corresponding system of weights, employed by most of the cities, supports a rich commercial activity between the cities lying east to the Aegean Sea.

The coinage of the Greek cities in Asia Minor from the sixth to the fourth century offers a complete picture of Greek coinage, its development throughout time and its 'behaviour'. The first coinage in electrum and its high value indicates that coinage, as an economic phenomenon, originated from the needs of the *poleis* to meet large expenditure. This means that the monetization of the *polis* economy took place first in the sector of the public economy. However, payments and expenses within the public economy (e.g. fines, loans from treasuries) were not in all cases very large. Thus the large denominations were supplemented by many fractions. This is supported by the evidence of the hoards. For instance, the archaic hoards from Asia Minor (*CH* I 3, burial *ca.* 525, *CH* VIII 2, burial *ca.* 560) contain only fractions.<sup>133</sup> In my view, the denominations of Greek coinage from its beginning down to the end of the classical period are an indicator that the monetization of the economy of the Greek *poleis* was a gradual procedure, which first was to be met in the public economy, where large-scale transactions were often required, and then, throughout time, penetrated transactions taking place between individuals at civic market. A moneyed public economy does not mean automatically that coined money prevailed in all transactions in civic life. This is probably a reason (along with prevailing ideologies, see below) that most of the Greek cities issued bronzes relatively late, only in the fourth century.

In the foregoing discussion we tackled issues such as the relation between coinage and trade and the interaction between coinage and monetization of, mainly, the public

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<sup>133</sup> See Kim (2002) pp. 44-51.

economy of the Greek *polis*. Now we will discuss to what extent the *polis* coinage was related to money-based institutions of the Greek *poleis*, or, in other words, to the monetization of the Greek economy, focusing on Athens, since Athenian democracy introduced certain payments which resulted in a rapid monetization of *polis* public finance.

The prolific coinage of Athens in the fifth century has often been discussed in relation to Athenian democracy and its institutions. According to Plutarch (*Per.* 12), democratic Athens was ‘salary-drawing city’ (see *Old Olig.* 1.3). It is true that under democracy payment for state offices was established. Pericles introduced pay for military services and the jury pay (*Ar. Athen. Pol.* 27.2-4). Many other payments were instituted throughout the democracy such as pay for magistrates (*Athen. Pol.* 41.3) and pay for needy Athenians (*Athen. Pol.* 28.3). The majority of state services required a payment (*Athen. Pol.* 62.2). Athenian democracy and the Athenian *arche* employed a considerable number of officials, who operated in Athens and abroad (*Ath. Pol.* 62.2). Additionally, a sum of money was left aside from the city’s treasuries for dinner at the Prytaneion, reserved for the magistrates and honoured persons, e.g. foreigners, who were awarded proxeny, were entitled to dinner at the Prytaneion. Aristophanes exploited widely the topic of massive state payments in his comedies (e.g. *Knights* 1. 255). Therefore the increase in the output of Athens’ coinage was prompted by institutionalised state payments.<sup>134</sup>

In my view, principles of the democratic constitution explain only partially the minting activity in fifth century Athens. State payments might have been made in

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<sup>134</sup> See Trevett (2001) pp. 23-34.



Athenian currency and thus the mint was kept active. But how large was the total expenditure for state payments? Undoubtedly, some payments were very low, for instance, the diobelia (whatever its purpose was, it means pay of two obols). One drachma was the maximum pay *per diem* for most of the state services. Since, according to the Athenian calendar, an ordinary year was 354 +- 1 days the annual pay for an official (e.g. for the archon in Salamis: *Ath. Pol.* 62.2) was relatively modest. From the *Athenaion Politeia* (24.3) it emerges that 1,950 individuals served Athens as office-holders at home and abroad, an outstanding number considering the population of Athens. Certainly, a sum of money was spent on their pay (roughly calculating on the basis of 3 obols pay per day the total was not to exceed the 70 T) but still quite moderate.

The *Boule*, the Council of Five Hundred, was the most important board of magistrates in democratic Athens. The *bouleutai* received a daily payment after each meeting of the *boule*, which only at the end of the fourth century was 5 obols. Thus the total cost for the payment of the *bouleutai* was something like 15 T per year.<sup>135</sup>

Also, 6,000 Athenians served as jurors (*Ath. Pol.* 24.3, Arist. *Wasps* ll. 661-2). The *dikastic* pay was raised by Cleon from 2 obols per day to 3 (Schol. Arist. *Wasps* 88, 300) and it remained the same during the fourth century (*Ath. Pol.* 62.2). On the evidence of Aristophanes *Wasps* l. 662, the annual expenditure for jury pay was 150 T. Such a figure seems very high.<sup>136</sup> On a normal court day a number of around 2,000 jurors was on duty. Court cases, especially private suits, were often suspended for a certain period of time (Dem. 39.17, 45. 4). Therefore a lower figure for the annual

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<sup>135</sup> See Hansen (1991) p. 255.

<sup>136</sup> Such an amount of money corresponds to the payment of 6,000 jurors for 300 days a year.

jury payments seems more realistic, that is, something like 34 T, which correspond to the payment of *ca.* 2,000 jurors for a court day in the span of 200 days in one year.<sup>137</sup>

Pay for attending the *Ecclesia* (*Ath. Pol.* 41.3) required considerable money, if we take into account that about 6,000 citizens attended the meetings of the *Ecclesia*. However, the *Ecclesia* was summoned 40 times a year and for the bulk of the fifth century the pay to each attendant was 3 obols, according to Aggyrrius' proposal (later was increased to 1 dr. (*Ath. Pol.* 42.3, 62.2)). The total amount, that is, some 20 T, was not very high. Taking into account that the war expenses, for instance, the expenses for the Samian war amounted 1,400 T, we can argue that state payments, which were introduced by the democracy, were relatively low.

If pay for public services was not very high, then small denominations were highly demanded. But the bulk of the minted coins consisted of tetradrachms, which were intended for heavy payments (the didrachms disappeared at some point. Didrachms did not appear in Starr Group IV). This means that the output of the Athenian mint was affected by other factors than state payments, established by democracy.

Athenian democracy and its institutions required coined money and, undoubtedly, affected the process towards a monetary economy. But I do not find in democracy *per se* an adequate reason to explain the prolific minting of the city for most of the fifth century. In my view, the following factors affected the output of the mint of Athens and resulted in prolific minting, especially in the years between 460 and 413 BC.

First, the building program undertaken in the era of Pericles, which required liquid

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<sup>137</sup> Hansen (1991) p. 188 gives a figure between 22 and 37 T for the jury payment. Podlecki (1998) p. 166 estimates the state expenditure for the *dikastic* pay to 100 T in Pericles' time, which means that 6,000 jurors were on duty for 200 days a year.

money for the supply of materials and for the pay of workers, kept the Athenian mint eminently active. But the building programme was not exclusively the product of democracy. I agree that the artistic execution of those marvellous works reflected the ideals and the pride of democratic Athens. However, the entire programme was mostly the product of the economic strength and of the new objectives of a growing city. Moreover, in the ancient world tremendous public works were related to tyranny rather than to democracy.

Second, the maintenance of the Athenian fleet explains adequately the continual and heavy output of the Athenian mint. Possessing a fleet, Athens favoured naval warfare and the Peloponnesian War was a naval war. Engaging in naval warfare, Athens was in need of liquid money and, for this reason its mint remained active through the years of the war. When Athens was prevented from the exploitation of the mines in the Laureion, it ceased the striking of its silver coinage.

Third, the political and economic growth of Athens, which resulted in the establishment of its *arche*, made the use of coined money necessary in the public and private sectors and also worked towards a rapid monetization of the Athenian economy (e.g. tribute payments in cash). In addition, in the second half of the fifth century Athens became the commercial and the cultural centre of Hellas and thus invited numbers of merchants, visitors and foreign residents. All these people brought with them a variety of currencies, which found their way into the market, the treasuries of Attic temples and into individuals' purses.

It has been argued, in favour of the close links between Athenian democracy and Athenian coinage, that the conservatism of coin types demonstrates the national pride of the Athenian demos under democracy. I do not agree with this argument. Undoubtedly, democracy remained the stable regime of Athens through the classical era and the Athenians boasted about this, as the epideictic speeches confirm. However, I cannot see any other obvious reason for the conservatism of the Athenian coin-types than convenience in transactions, derived from the conventionality of Athenian coinage.<sup>138</sup> Official documents such as the jurors' *pinakia* and the *symbola* carried an official validating stamp similar to the coin types. Thus a degree of homogeneity was achieved in the tokens of the city's administration.

In the fourth century Athens continued issuing its civic coinage. But the output of the mint, the quality of minting and the degree of its circulation did not reach the standards of fifth century Athenian coinage. Despite the fact that in the fourth century Athenian coinage was not as prolific as in the fifth century the economy of Athens had reached a high level of monetization. This is confirmed by the banking process which was considerably developed during the fourth century. In addition, the leasing of public and private property (mines, sacred land, farmlands and houses), although common in the fifth century, was developed and became a basic financial factor in fourth century Athens. This required liquid money. Fourth century orators and politicians such as Demosthenes argued for a monetary economy (e.g. IV 28, VIII 24-

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<sup>138</sup> The unchanging types of the coinage of Athens have been regarded as the outcome of their increasing acceptability at markets in a wide area. Keeping the coin-types the same, the Athenians made their coinage recognizable in all areas, where they had economic interests. This argument explains the phenomenon only partially. Many cities with coinage highly acceptable at international markets kept on changing their coin-types. It was common in the coinage of the Greek cities to create a standard pattern, which made the coinage of the cities recognizable. But, at the same time, there was room for variations and changes, dictated by artistic preferences, by certain events of importance and by changes in the board of the moneyers.

26, VIII 45). Therefore the output of a mint was not entirely related to the degree of monetization of the *polis* economy. The coinage of a city was affected by the available financial resources and the supply of silver (or gold). Thus Athens, possessing rich financial resources and good silver from the mines of Laureion in the fifth century, assumed a prolific coinage.<sup>139</sup>

The coinage of the Greek cities was not a civic coinage in all cases. Categories of Greek coinage were the federal and the festival coinages. For example, the cities in Boeotia issued a federal coinage, because they were organised into a political confederacy from the second half of the sixth century BC. Federal was also the coinage of the Thessalians in the fifth century. Here we discuss the coinage of the Arcadians, which has been regarded as federal and also as festival coinage, and the festival coinage of Elis.

In the fifth century the cities of Arcadia constituted a confederacy and therefore the first coinage of the Arcadians was a federal one.<sup>140</sup> Nevertheless the confederacy of the Arcadians in the fifth century, even in a looser form, has been questioned.<sup>141</sup> In my view, in the fifth century the Arcadians maintained a form of confederacy. But the organisation of the Arcadians in the fifth century was not similar to and did not function as the fourth century Arcadian Confederacy, after the foundation of

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<sup>139</sup> Similarly, the archaic coinage of the Cyclades islands was prolific and circulated in a wide area in the East while coinage was on a small scale in the latter part of the fifth century and in the fourth century (the evidence of the hoards dating from 500 to 470 BC: *CH* 2, 24, *IGCH* 7, 8, 13, 1636, 1637, 1638, 1639, 1640, 1644, 1645).

<sup>140</sup> The confederacy of the Arcadians in the fifth century had been attributed to the activities of Cleomenes of Sparta (Hdt VI 74). I think that Herodotus' account of Cleomenes' achievement in organising the Arcadians in a confederacy is not conclusive. For Herodotus' narrative heavily relied on oral tradition and, thus many elements of folktale were incorporated in the text. See Griffiths (2001) pp. 75-89.

<sup>141</sup> More recently by Nielsen (1996) pp. 39-61.

Megalopolis *ca.* 370 BC.<sup>142</sup> In the fifth century the union of the Arcadians was based on the perception of a common ethnic identity and hence it did not function as a full political federation.<sup>143</sup>

The Arcadians assumed minting from a relatively early time (*ca.* 490 BC). Three mints operated the Arcadian coinage, one located in Tegea, a second in Cleitor and a third in Mantinea. The fifth century federate Arcadian coinage has been classified in five Periods of minting.<sup>144</sup> In the first period (*ca.* 490-477) only the mint of Cleitor was in operation. The volume of dies for the coinage of the Period III indicates intensive minting assumed concurrently by three mints. The coinage of Period IV (*ca.* 462/10-428) and of Period V (*ca.* 428-18) was minted in Mantinea.<sup>145</sup> The cessation of the other mints implies either a reduced need for coinage or scarcity of resources required for coinage. The federal Arcadian coinage lasted for a relatively long period (*ca.* 490-418 BC).

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<sup>142</sup> In my view, our sources point to a loose form of Arcadian confederacy in the fifth century rather than to the non-existence of such a confederacy. First, the very structure of the *poleis* in Arcadia made effective their coalition which resulted in the *ARKADIKON* coinage. The most important cities in Arcadia were synoecised in the first quarter of the fifth century (Strabo VIII 3.2: Tegea, Elis, Xen. *Hell.* V 2.8: Mantinea) and since then they were independent city-states. Major Arcadian cities had a number of dependent cities or small communities situated in their territory. E.g. Mantinea formed a kind of *symmachia* (Thuc. IV 134.1-2, V 28.3-29.2, V 33.1-3) and Orchomenos a kind of *synteleia*. The dissolution of the city of Mantinea into its constituent villages (*komai*) by the Spartans in the fourth century (Xen. *Hell.* V 2.1-7) provides evidence for the structure of the Arcadian *poleis*. See Nielsen (1996) pp. 63-105, Roy (1996) pp. 107-112. Second, alliances between certain Arcadian cities were concluded (e.g. the alliance between the Eleans and the Hereans in 500 BC (ML 15)). Third, individual cities developed imperialistic ambitions in the area (e.g. the ambitions of the Eleans upon Lepreon: Thuc. V 31) and their policy towards Sparta was not always common. The battles fought by the Spartans and cities in Peloponnesus (at Plataea, Tegea, Dipaea, Isthmus, Tanagra: Hdt IX 35, Paus. III 11.7-8) reveal different alliances between the Arcadian cities and Sparta. The same picture derives from Thucydides' *History* (e.g. V 75: the battle of Mantinea). See Lewis in *CAH V* pp. 96-120, Andrewes (1952) pp. 1-5, Wallace (1954) pp. 32-35.

<sup>143</sup> Arcas was the eponymous hero of the Arcadians. The reverse type of fourth century silver coins of the city of Pheneus represents the myth of Arcas.

<sup>144</sup> R.T. Williams (1965) pp. 1-140.

<sup>145</sup> A lower date has been proposed for the end of the Period I and the beginning of Period II, *ca.* 465 instead of 477 BC. Kraay (1976) p. 97. The wreath of olive around the goddess' head has been considered as the product of influence of the Athenian decadrachms with wreathed Athena attributed to the period after the Persian Wars. Since this particular Athenian issue is now dated *ca.* 467 BC, a lower date for the Arcadian issues has been adopted as well.

The main types of the confederate coinage of the Arcadians were the head of a goddess (*Despoina*) turned to the left with hair done in a krobylos on the reverse and Zeus (Lycaeus or Meilichios) seated, facing left with an eagle on his extended arm and a sceptre in his right hand and the ethnic ΑΡΚΑΔΙΚΟΝ (in an abbreviated form ΑΡ, ΑΡΚ, ΑΡΚΑ for the first issues) on the obverse. The *ΑΡΚΑΔΙΚΟΝ* coinage was struck on the Aeginetan standards and only in small denominations, triobols, the predominant denomination, obols and half-obols.

Changes in the political situation in Peloponnesus led to the cessation of the coinage of all the Arcadians and to the beginning of the autonomous coinage of the cities in Arcadia. First, the strengthening of Spartan power in Peloponnesus and its hegemony in the Peloponnesian League dissolved the objectives of the Arcadian League (it is not necessary to assume a particular Spartan enforcement in the disintegration of the Arcadian federation). Secondly, the Peloponnesian League absorbed minor coalitions in Peloponnesus, especially when the League was opposed politically and military against the Athenian League during the Peloponnesian War. Thirdly, the exigencies of the Peloponnesian War made Sparta understand the importance of financial resources and of coined money for naval warfare. Coined money in the war-chest of the Peloponnesian League during the war might have been provided by the minting cities of Peloponnesus (as well as Persian money in the last years of the war). Such a situation explains the beginning of the autonomous coinage of the Arcadian cities and the prolific output of some of them.

When the confederate coinage of the Arcadians ceased, individual cities assumed their own coinage. Excavations in the area, in particular, in Olympia, brought to light

specimens of the autonomous coinage of many Arcadian cities.<sup>146</sup> Among them Sicyon produced a considerable volume of coinage from the late fifth century until the fourth century and became the main minting state in Peloponnesus in the fourth century.<sup>147</sup> The autonomous coinage of the Arcadian cities ceased by the time of the foundation of the Arcadian League (370 BC).

The coinage of the Arcadians has also been regarded as a religious and agonistic coinage.<sup>148</sup> This theory was borne out of comparison with the coinage of Elis, which was a festival coinage, related to the Olympic Games. Did the Arcadians issue coins under the ethnic *ARKADIKON* because they wanted to meet the needs of certain festivals? It is true that the festivals of the Greeks created an economic sphere, which required monetary policies. The large number of people participating in festivals and the monetary transactions taking place during festivals increased the demand for coined money. The demand for coined money was met either by increase in the output of local mints or by circulation of other currencies.

Small denominations, which prevailed in the coinage of the Arcadians, might have been used at local festivals. Small coins were similarly used at local markets. Small coins were also used for payments of soldiers. A triobol was the daily payment for the rations of a soldier in Peloponnesus (Thuc. V 47.6). Thucydides notes that the Arcadians served in Greek armies as mercenaries (III 34.2-3).

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<sup>146</sup> For instance, in the Olympia excavations of 1977-1982 coins of many mints in Arcadia are found: Elis (136), Sikyon (91), Heraia (56), Pheneos (19), Mantinea (14), Arcadia (11), Cleitor (7), Orchomenus (7), Tegea (4).

<sup>147</sup> See Warren (1983) pp. 23-56.

<sup>148</sup> Head *HN2* pp. 444-445, 447-448. Babelon (Ἀρκαδικῶν ἀγώνων σῆμα (κόμμα, χαρακτήρ)), Gardner connected the coinage of the Arcadians with the festival of Zeus Lycaeus. The theory of the *ARKADIKON* coinage as a festival coinage has recently revived by Nielsen (1996). He argues that it was either the coinage of Tegea or a festival coinage because of its type with the image of Zeus Lycaeus (in whose honour great pan-Arcadian games were celebrated). The legend must refer to the organisation in charge of the Games.



In my view, the payment of soldiers was the main reason for the coinage of the Arcadians. The cities of Arcadia were very often involved in hostilities because of the dominance of Sparta on Peloponnesus, of the influence of Argos, the rival city of Sparta, on some Arcadian cities (Diod. VIII 1.3.2) and of their position in the Peloponnesian League. If Arcadia was the main provider of mercenaries in classical antiquity, then a degree of familiarity with monetary exchanges would be found among the Arcadians. Thus the small pieces of the *ARKADIKON* coinage aimed at use at local markets. The evidence of hoards supports such a conclusion. Both federal and civic coins of the Arcadians did not travel far distances and thus are found in hoards in Greece (*IGCH* 11 (burial: *ca.* 480, 29 (burial: 430-400, 30 (burial: 425-400, 40 (burial: *ca.* late fifth century)).<sup>149</sup>

The coinage of some cities, where Panhellenic temples were located, has been regarded as a festival coinage. Such a coinage was the coinage of Elis. The Eleans had the control of the temple of Olympia and thus their coinage was the coinage of Olympia, where the Olympic Games took place. In fact, it was a kind of souvenir from the festival.<sup>150</sup> This probably explains the large number of countermarks found in issues of Elis.

The hoards provide evidence that many coins of Elis, especially staters, travelled in many areas in Greece proper. However, they do not appear in hoards in the East or in the West. The distribution of the coinage of Elis in the hoards supports its character as

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<sup>149</sup> Findings of coins of Arcadian cities in hoards in the Levant (*IGCH* 1500, burial *ca.* 332 BC) and in Egypt (*IGCH* 1643, burial *ca.* 480 BC) are on a very small scale to be connected with any commercial activity.

<sup>150</sup> Seltman (1921). Two mints were probably in operation at Olympia, that is, one located at the temple of Zeus and a second situated at the temple of Hera. The coinage of Elis (or Olympia) was connected with the Olympic Games for a long period of time (from 510-471 BC (Seltman Gr.I) to 191 BC (Gr. L).

a festival coinage. This coinage served the monetary economy, which the festivals of the Greeks created.

The coinage of Elis was struck in the large denomination of the stater with fractions as drachma, hemidrachm, obol and hemiobol. The types of the coins are related to Zeus and Hera. They are extremely beautiful and are executed in a highly artistic way and thus are regarded as masterpieces of Greek coinage.<sup>151</sup> The high art of the coin-types was related to their commemorative character. The execution of many coin types was possibly influenced by the sculptures in the temple of Zeus. The variety of types related to the deities of Olympia supports further a festival coinage. The first Elean piece represents an eagle (obv) and the next issue an eagle with serpent. The latter type was similar with an issue of Chalcis, which was struck before the Athenian conquest of the city in 507 BC. Thus the beginning of the Elean coinage is placed in *ca.* 510 BC (Seltman).<sup>152</sup> The city of Elis was synoecised in 471 BC (Diod. XI 54). Since coinage under the name of Elis was not a civic coinage but an agonistic one, the date of Elis' synoecism is not decisive for the date of the beginning of its coinage.

All the coins have the legend F/A or FAΛEION on the reverse and sometimes on the obverse. A coin belonging to Group B (*ca.* 471-452), Series VI (Seltman no. 37) carries the double legend FAΛEION OΛYMPIKON. The word OΛYMPIKON probably stands for Ὀλυμπικῶν ἀγώνων σῆμα, παῖμα, χαρακτήρ.

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<sup>151</sup> The main types were Zeus seated (obv) and eagle (rev), eagle (obv) and Nike seated (rev), head of Zeus (obv) and thunderbolt (rev), head of Hera (obv) and eagle (rev), head of Zeus (obv) and head of Olympia (rev).

<sup>152</sup> A lower date has been proposed on the assumption that Chalcis resumed its coinage short after the Athenian conquest following the same type of eagle with serpent (Kraay p. 104).

### 3. *Polis* legislation and *polis* coinage

We shall focus on Athens and the *polis* concern with coinage. Athenian coinage was prolific. Coined money became the means for small and heavy transactions from the archaic to the classical era and, finally, coined money prevailed in the economy of Athens. But did the Athenians develop any particular view of their coinage? Did coinage become an issue in the legislation of the Athenian boule and in the decrees of the demos? To put it another way, is there any of the many decrees passed by the Athenians which concerns Athenian coinage? Such a question seems significant in understanding whether coinage was an internal component of the economy of the Greek *polis*.

The reforms of Solon concerning weights and measures seem a good starting point. According to Solon's reforms, the Attic measures and weights were increased (*auxesis*, Ar. *Ath. Pol.* 10, Plut. *Solon* 25.4, Andokides I.83). More specifically, the mina now consists of 100 dr., instead of 73 dr., as it was before (the mina consisted of 70 dr. on the Aeginetan standard). The main issue raised is whether Solon's reforms also concerned coinage. If we take into account Aristotle's reference to the didrachm as the previous coin (*character*), then we can assume that the new denomination, alleged by Solon, might have been the tetradrachm. The lower date, given earlier in the chapter for the beginning of the Athenian coinage, makes improbable that the law of Solon was concerned with coinage. Probably the author of the *Athenaion Politeia* had in mind a long process from the archaic period to his era and thus he stated what was common in his era. This often occurred in fourth century works which referred to earlier periods. In Solon's Laws certain fines were to be paid in drachmae. For

instance, fines of small amounts as three drachmae (paid to an injured individual) and two drachmae (paid to the public treasury (*demosion*)) and of larger ones of 100 drachmae were legislated by Solon (Plut. *Solon* 21, 1, 23.1). Also, victors at Games were to be rewarded with large sums in drachmae (Plut. *Sol.* 23.3).

The statement of Plutarch that the lack of money in the city made the monetary punishments heavy (he uses the words *nomisma*, *argyrikas zemias*) requires attention (23.2). The economic matters raised by Solon's laws apply to a monetary economy. Athenian economy was monetary at the time of Solon. However, monetary economy does not require automatic use of coined money.<sup>153</sup> Thus the reforms of Solon referred to a monetary economy, where silver was used in many transactions (as bullion or ingots not as coined silver).<sup>154</sup> Even the vocabulary used by Plutarch shows how words, initially coined for bullion or other civic tokens, were used later in the context of coinage. Despite the fact that Solon's reforms concerned measures and weights and not coinage, they throw some light on our question. The measures and the weights of a *polis* and its coinage standards, when coinage commenced, were a matter of political decision.<sup>155</sup> Hence each city made its specific choice of standards, according to the demands of domestic commercial transactions, of international trade and of political exigencies.

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<sup>153</sup> By the time of Solon a rich man possessed silver and gold (Solon fr 24 West) and thus 'it is credible that the use of coins, standard pieces of silver of guaranteed weight and purity, was adopted as an improvement on an earlier system reckoned in standard weights of silver but had no standard and officially recognised pieces corresponding to those weights'. Thus Solon in 594/3 enacted laws which expressed values in drachmae. See Rhodes *Comm.* (1981) on 8.iii, 10.i-ii.

<sup>154</sup> For Solon's reforms see Crawford (1972) pp. 5-8, Kraay (1968) pp. 1-9

<sup>155</sup> In Athens the standard weights and measures were deposited in the Tholos (*IG* II<sup>2</sup> 1013). Their official character was indicated by the word *DEMOSION* and by the stamp of the city (identical with the coin type). See Shear (1935) pp. 343ff, Thompson (1940) p. 141.

There is a fifth century Athenian decree which is concerned with Athenian coinage, the so-called Coinage Decree (ML 45).<sup>156</sup> According to the decree, all members of the Delian League were to use Athenian coins, weights and measures while the local mints would be closed. Athenian officials in the cities or local officials were to be responsible of carrying out the decree. The masters of the mint at Athens were to convert foreign currencies into Attic coin and a minting fee was specified. Every city was to set a copy of the decree into the Agora. Heavy punishment was to be imposed to any offenders against the decree.<sup>157</sup>

The enactment of the decree had political character, as the plethora of the Athenian decrees passed at the time of the Athenian *arche*. Our concern is with the economic aspects of the decree and, more specifically, whether the Athenians considered economic objectives while passing the decree.

We have argued that in the second half of the fifth century Athenian minting was prolific. Athenian 'owls' travelled long distances as emerges from hoard evidence because of extensive trading, high acceptability of Athenian silver coinage and of a

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<sup>156</sup> Different dates have been suggested for the decree: 450-46, 426/5, before 414 BC. I agree with the most recent consensus that the decree was passed in a period after 425 BC down to *ca.* 420s.

<sup>157</sup> A composite, but still incomplete text has been restored from copies of the decree found in Cos, Syme, Siphnos, Smyrna, Aphytis, Hamaxitos and Odessa, recently by Figueira (1998) pp. 324-325, 333, 367, 419. There are many variations in the language and the lettering used in all different copies of the decree. This led to a set of suggestions about how a particular copy of the decree found its way into the Agora of an allied city. It has been assumed that there was an archetypal text, which was passed by the Athenian demos. Then the text was transmitted to a given city of the Delian League. Moreover, it seems possible that there was a third level of transmission, that is, an intermediate city or agent. In this way, we can explain, to a degree, why, for instance, Doric-speaking Syme had a copy in Ionic lettering. In my view, it is not necessary to assume that a copy of the decree was erected in the Agora of every single city of the Empire at the same time, immediately after the decree was passed by the Athenians. I think that the political and economic situation of the cities of the *arche* affected the chronological and geographical distribution of copies of the decree. This means, that what the Athenians decreed about the coinage, the weights and the standards of their subject-allies had been modified to a certain degree because of the status of a particular city and its role in the *arche* (e.g. Syme had disappeared from the *Aparchae* Lists in 432 but it received a copy of the decree). Thus we can find new riders and certain additions to the clauses of the decree.

network of political, economic and cultural connections of Athens with many cities in the East and the West. Athenian currency was in use in many cities which ceased or reduced coinage at a certain period or issued coinage on a small-scale. Athenian silver tetradrachms were used along with other currencies for large transactions, especially within cities whose coinage production was concentrated on small fractions. Part of the tribute of the allied cities was paid in Athenian silver coins but not in total. A number of cities had employed the Attic standard for their coinage during the second half of the century. The Peloponnesian War and the involvement of many cities in the war as well as the expansion of the war to a large geographical area made the Athenian 'owls' a significant currency in order for the expenses of the fleets of the cities to be met and the wages of sailors to be paid. The coinage of Athens therefore was an international currency at that time.<sup>158</sup> We can therefore argue that the Coinage Decree aimed at a certain consolidation and a further development of what had already been achieved by Athenian civic coinage in international markets and in the financing of the Greek wars. This was the rationale behind the Athenian decree.

In my view, the Coinage Decree did not introduce any new economic policy derived from Athenian imperialism but it was related to the economic growth of Athens in the fifth century. The growth of Athens had created a zone of economic interests where Athenian coinage had enjoyed high status in commercial exchanges. Moreover, the legislation of the Athenians related to their coinage reflects a common procedure, according to which the economic supremacy of a *polis* led to the employment of its coin standard by certain minting cities. As we argued earlier, many cities employed

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<sup>158</sup> Figueira's (1998) p. 422 argument that the decree did not aim at the cessation of the civic coinage of the cities of the Delean League but at the recognition of Athenian coinage, standards and measures as valuable within the cities seems to me inadequate. For Athenian coinage, as we have argued, was a legal tender for many transactions taking place in many cities of the empire.

for their coinage the Aeginetan standard because of the predominance of Aeginetan coinage in achaic period. Thus epichoric standards became at a certain time international standards (e.g. the Rhodian standard in the fourth century).<sup>159</sup>

Did the decree concern immediate economic profit? It has been argued that Athens would have benefited by the minting fee, paid probably by the allies. However, the minting fee was low to become substantial state revenue (Figueira: 3%-5%). Another consideration might have been an increase in the tribute payment since it would have been paid in Attic currency. Undoubtedly, tribute money was a significant resource for Athens as we argued in the first chapter. But the Athenians did not estimate the financial resources of the city only in Athenian silver coins (*argyriou episemou*: Thuc. II. 13.4). The treasuries of Athens consisted of bullion and coined money belonging to different mints (e.g. staters of Cyzicus). At the time of the decree, the Athenians had already advanced other measures to raise money for the expenses of the war, such as the *eisphora* tax. The enactment of the decree might have also led to a certain consolidation of the ratio between silver and gold and to the value of the electrum coinage. Thus any loss in the mint of Athens because of conversion, for instance, of electrum coinage into Attic silver might have been reduced. However, it is not necessary to assume that all currencies which found their way into Athens in the fifth century were converted into Athenian owls, especially electrum coins with high acceptability. Coins, struck in other mints, circulated amply and were used widely in Athens as is confirmed by the inventories of the Athenian treasuries and by the

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<sup>159</sup> In a later period Plato argues for a Hellenic coinage used by all Greek cities for military pay and travel abroad (*Laws* Bk 5 742a-b). Meadows (Conference: The Athenian Standards Decree: New text-new context?, Oxford, April 2004) explained how epichoric standards attained Panhellenic status (i.e., epichoric Chian standard became Panhellenic as Rhodian). He discussed the objectives of the Coinage Decree in comparison with the ΣΥΝ coinage minted after the dissolution of the Athenian *arche*.

accounts of public expenditure (see chapter 1).<sup>160</sup> Therefore the Athenians passed the decree not because they were concerned with direct fiscal yield but because they aimed at the strengthening of a particular economic situation related to the political and economic character of the Athenian *arche* and as a consequence to Athenian coinage.<sup>161</sup>

We can also argue that the Standards Decree reflects the official concern of the Athenians with their coinage. The context of the decree reveals that the Athenians had developed a full understanding of the function of their coinage in the sector of the *polis* economy. They were also aware that, by transforming their coinage from an epichoric into an international currency, their economy would benefit. Finally, the Coinage Decree was connected with the capability of Athens' mint to assume a very large output. The Athenians were aware of this. Thus the provisions of the decree show that throughout time coinage became a matter of Athenian legislation because of a developing understanding of the economic role of coinage.

The concern of the Athenians with their coinage becomes evident from the Athenian currency Law of 375/4 BC (Stroud, *Hesperia* 43 (1974) pp. 161-88). The main

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<sup>160</sup> However, excavations in the Athenian Agora brought to light a broad range of foreign currencies but not large enough regarding Athens' economic activities. In particular, fifth century foreign currencies are modestly represented. Among the foreign coins found in the Agora, there are some early coins: two very early Aeginetan staters *ca.* 510-490 (*Agora* XXVI nos. 658, 659), 1 Aeginetan stater *ca.* 490-80 (no. 660), 1 Aeginetan stater *ca.* 479-59 (no. 661) and a plated counterfeit of a Siphnian silver hemidrachm (6<sup>th</sup> c) (no. 846).

<sup>161</sup> Figueira (1998) pp. 236-239 argues that the economic ramifications of a single monetary system should have been beneficial, but the benefits will have gone to both the Athenians and the non-Athenians indiscriminately. Thus the decree was to the advantage of all the citizens of the states of the alliance. His argument is not convincing. In my view, such a consideration of the Athenians did not fit the character of the *arche* (i.e., as it is described by Thucydides). Moreover, at the time of the decree we cannot expect a single monetary system, since many of the Greek cities minted their civic coinage and a variety of currencies circulated within cities. In my opinion, regarding Greek coinage we can argue that some currencies became 'international' because of prolific output, wide circulation and high acceptability. But we cannot argue for a particular currency used by all Greek cities as an official tender. Only after the minting of the gold 'Philippeioi' we can find the beginning of such a monetary policy.



clauses of the law are the following. 'Attic silver shall be accepted as legal tender'. 'The public certifier (*Dokimastes*) is to try the coins'. 'If anyone brings (a coin) having the same stamp as the Attic the public certifier is to give it back to the one who brought it forward'. But if it is bronze beneath the silver or lead beneath or base, he is to cut it across and it is to be sacred to the Mother of the Gods and to deposit it with the Boule'. 'If anyone does not accept whatever silver coinage the certifier tests and approves, let him be deprived of whatever he is selling on that day'. The remainder of the decree concerns penalties imposed on those who would suspend the enactment of the decree and with the procedure required for the imposition of the decree. A large board of officials were involved in the enforcement of the law.

The law alludes to three different classes of silver coins, namely Athenian silver coins bearing the *dokimos character*, foreign silver coins with Athenian types and foreign currencies. These categories of silver coins represented coinage of good silver. However, three more categories of coins were to be found at the market, that is, bronze, lead cores converted with silver leaf and coins struck on base metal. The latter would be banished from the market.

What coins of good silver were approved by the certifier to circulate freely in Athens? It has been argued that, according to the Law, foreign imitations of Athenian owls were to be accepted as currency in Athens.<sup>162</sup> In my view, the law aimed to enforce the acceptance of Athenian silver coinage. Undoubtedly, foreign currencies circulated to an extent in Athens (the evidence of foreign coins found in the Athenian Agora). But the law of 375/4 was passed under exceptional circumstances. At that time,

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<sup>162</sup> See Stroud (1974). Contra Giovannini (1975) pp. 185-196, Buttrely (1979) pp. 33-45.

issues-imitations of the Athenian civic coinage were extensively minted in the East (the evidence of hoards: *IGCH* 1649, 1663, 1487, 1488, 1490, *CH* II 45). Such coins of good silver passed as *nomisma eudokimon*, but not as *nomisma dokimon*, meaning the civic coinage of Athens. Thus the law intended to protect the acceptability of the *dokimon* coinage of Athens, at least within the city itself. The large issues of imitations of Athens' owls had replaced the civic coinage of Athens in many transactions taking place in the East and, moreover, the monopoly of Athenian currency had been damaged. Therefore the circulation of the Athenian issues in international markets might have been reduced. Although the Athenian owls became an international currency, their privileged status was not connected directly with the civic mint, that is, the output of the mint and the profit derived from reminting, and with the city's economic policies. For this reason, a law to protect the civic coinage of Athens was required. The Currency Law of 375/4 was concerned with civic coinage rather than with coins of good silver against counterfeits. Thus we can argue that, in fourth century Athens, civic coinage was the medium approved by the law for commercial transactions in the city and was protected against the extensive emissions of Athenian imitations.

The evidence for Athenian legislation concerning weights, measures and coinage is not plentiful. However, it gives a glimpse of a certain procedure, according to which coinage was seen as an integral element of the economy of Athens. Thus coinage was under the law in order for its *dokimon* character, its good quality and its circulation against other currencies to be safeguarded. Moreover, the Athenian decrees concerning coinage prove that the use of money in the Greek world became a sophisticated procedure over time.

#### **4. Athenian *arche* and the coinage of the Greek *poleis***

The cessation of the coinage of many Greek cities in the fifth century has been attributed to the Athenian *arche* and the policies derived from it. We shall discuss this issue starting with the coinage of the Cyclades islands. It has been argued that the political character of the Athenian *arche* impelled the cessation of coinage in the Aegean. The argument is, to a considerable degree, focused on the Athenian Coinage Decree (see earlier in this chapter). In my view, we can explain the cessation of coinage on the Aegean islands in another way than as the result of the imposition of the Athenian Coinage Decree.

In the period before the battle of Mykale, the Cyclades islands undertook coinage in large denominations. In the following years 479-65 some islands (e.g. Naxos, Thera and Tenos) ceased coinage. In the years 465-50 very few islands issued coins, mainly small pieces. For the rest of the fifth century the Aegean mints remained closed. Only in the fourth century did the islands resume their coinage. From the above, it seems that the prosperity of the Aegean islands in the archaic era declined in the succeeding years. In the Melian dialogue in Thucydides' history, the Melians emphasized the paucity of their financial resources (V 97). All the Cyclades islands had meagre financial resources. Their natural resources were too limited to allow economic prosperity without a substantial trade activity. This becomes evident from the tribute lists. The tribute paid by the majority of the islands in the West Aegean was relatively low (with the exception of 30 T tribute paid by Aegina). Moreover, the tribute paid by the islanders was decreased from the assessment of 453 down to 420 BC. For instance, according to the Tribute Lists the twelve talents paid by Andros in the year

450 were reduced to six in the years after. Thus the decline of the Aeginetan supremacy in overseas commerce of the archaic period during the classical period affected the economy of the islands and their coinage. In addition, the Athenian supremacy on sea-borne trade in the period after the Persian Wars until the end of the fifth century did not allow the islands to develop a substantial trade and thus to maintain a prosperous economy. For this reason foreign currencies and, to the greatest extent, Athenian owls, served the needs for coined money on the islands.

A further point needs consideration. The payment of tribute to Athens by the islands of the Cyclades did not affect entirely the practice of their coinage. The coinage of the small island of Cea gives an example. The three cities of the island, Carthaia, Coresia and Ioulis were organised into as a 'synteleia' for the payment of the tribute to Athens and later in 454 BC into a confederacy. However, each of these cities issued coins under its ethnic (e.g. ΚΑΡΘΑΙΑΙ for Carthaia). The small-scale coinage of the cities of Cea and the cessation of their coinage for a long period in the fifth century indicates that other currencies, Athenian 'owls' among them, freely circulated there and many of the commercial transactions were carried out with coins of other cities.<sup>163</sup> Furthermore, it indicates that tribute to Athens was paid in a variety of currencies.

In the fourth century the Cyclades islands recommenced coinage on the Rhodian standard which was employed all over the East Aegean and Asia Minor. The withdrawal of the Athenian sea-power from the Aegean was decisive for the islanders to undertake activity at sea. Moreover, in the fourth century the sequence of the Greek wars and their expansion to a wide area (in terms of geography as in terms of

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<sup>163</sup> For the coinage of Cea see Papageorgiadou-Banis (1997).

diplomacy) made the use of coined money indispensable, and this affected the character of Greek coinage. Also, in the fourth century the monetization of the *polis* economy was a total phenomenon, which made the need for liquid money to be felt in everyday exchanges. Under these circumstances the Aegean islands resumed coinage in the fourth century. Even islands, which had no coinage in the fifth century, issued their first coins in the fourth century (e.g. a series of bronze issues and some small silver coins have been attributed to the mint of Nisyrus in the fourth century).<sup>164</sup>

Similarly, the mints of the prosperous islands of Lesbos, Samos, Rhodes, Cos and Chios remained inactive for a period during the fifth century (e.g. there is an interval between the years 448 to 429 BC in the output of the Chian mint while the mint of Cos remained inactive from *ca.* 450 BC until the time of its synoecism in 384 BC).<sup>165</sup> Again, the closure of these mints in the Aegean has widely been explained as result of the Athenian Coinage Decree. We have already dismissed the decisive role of the Coinage Decree in the operation of certain mints in the second half of the fifth century.

Why did the mints of these islands remain inactive for a certain period at the time of the Athenian *arche*? Many mints on the islands were inactive because of the economic and the political situation, which Athenian imperialism and the Peloponnesian War created. More specifically, the dominance of Athens in the Aegean and the operation of most of the trade in the Aegean by the Athenians decreased, to some degree, the economic activities of the islanders and hence their economy was affected. The violent suppression of the islands' revolts from Athens

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<sup>164</sup> See Ashton (1999) pp. 15-24.

<sup>165</sup> See Figueira (1998) ch. 5

resulted in civil conflict and political instability on the islands for long periods of time. The diminishing operations of the islanders in the Aegean and the long-term war affected their supplies of silver. The economic and political crises, experienced by the islands in East Aegean, led either to the reduction of the coin production or to intervals or cessation of minting for a certain period in the second half of the fifth century.

But still remains the question why the islands of the East Aegean reduced or ceased their civic minting for a period of time when they maintained an outstanding fleet, as emerges from the history of Thucydides and Xenophon. A possible answer is that expenses required for maintaining a fleet were paid in many currencies and often on the spot. Also, since the fleet of the islands was put in the service of the Delian League some of the expenses were met by Athenian coinage, which became an international currency in the fifth century. However, despite certain intervals in the civic coinage of the islands, their coinage was prolific over a long span of time and circulated in a wide area. This can be explained partially by the needs in coined money demanded for the fleet that the Eastern Aegean islands maintained in the fifth and fourth centuries BC.

Aegina ceased its coinage some time in the middle of the fifth century. The Aeginetan mint reopened after the Peloponnesian War. We can argue that the growth of Athens and the imposition of its rule on the island in many ways (e.g. Athenian cleruchies on the island) destroyed the potentialities for independent coinage. By saying this, I mean the economic rather than the political status of the island under Athenian rule. The imposition of the political *arche* of Athens on many city-states in the Aegean did not

prevent them from minting their coinage, when economic factors supported the minting of civic coinage (i.e., availability of silver and maintenance of a fleet).

The view that the Athenian *arche per se* and the means for its imposition on the Greek cities was not the main reason for interruptions in the civic coinage of certain cities is enhanced by the case of the coinage of Corinth during the Peloponnesian War. During the Peloponnesian War the mint of Corinth reduced its output. This seems peculiar because during the war Corinth maintained a fleet, the most important fleet of the Peloponnesian League, and thus the need for liquid money was very high for the payment of sailors and the maintenance of the triremes.

We can assume that the issues of other mints in Peloponnesus met the expenses of the Corinthian triremes which were in the service of the League. By the late fifth century Sicyon became the main coin-producing city in Peloponnesus. The different weight of the Corinthian stater to the Aeginetan stater, which was employed by the cities in Peloponnesus, probably reduced its use for the war funds of the Peloponnesian League. Moreover, during the war the access of Corinth to silver supplies was difficult, since silver for Corinth's coinage came mainly from the Laureion. The coinage of the Corinthian colonies supports a close interrelationship between the mints of the colonies and the mint of the metropolis. Thus we can argue that the exigencies derived from the Peloponnesian War led to a complementary coinage of the mint of Corinth and of its colonies. The reduced production of the Corinthian mint was supplemented by the 'Pegasoi' minted elsewhere (i.e., in Ambracia, since its coinage during the Peloponnesian War was plentiful). In this way, Corinth was in position to meet the expenses of the war (Thuc. I 27.2, 30.1).

The topic of how an *arche* or a dominant power affected the sequence of coinage of Greek cities needs further consideration. The dominance of Sparta over Peloponnesus during the fifth and the first quarter of the fourth century provides a good example. The dominance of Sparta did not prevent the cities in Peloponnesus to assume their civic coinage. It has often been argued that Spartan hegemony in Peloponnesus impeded the coinage production of the cities in the area, which became prolific after the Spartan defeat at Leuctra in 370 BC. Undoubtedly, this is true for Messenia. It commenced its coinage only after 370 BC. But it does not apply to the coinage of all the cities in Peloponnesus.

Sparta did not issue civic coinage during the archaic and classical era. However, liquid money was in circulation and in use in the city.<sup>166</sup> Moreover, Sparta's politics in the Greek world were built upon the understanding of the importance of financial resources and money for winning wars and maintaining a hegemony. Such an understanding was gradually achieved during the Peloponnesian War and exercised in the years of the Spartan hegemony in the Greek world after the Peloponnesian War. Thus, in my view, the late date for the beginning of the coinage of certain cities in Peloponnesus and the short-lived issues of others are explained as the result of economic and political factors within the cities rather than as merely the result of Sparta's dominance over the Peloponnesian cities. The development of Greek coinage from the archaic to the end of the classical era, although affected by political sovereignty, was primarily orientated to economic exigencies.

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<sup>166</sup> According to tradition, possession of money by individuals was forbidden in Sparta by the Laws of Lycurgus (Xen. *Lac. Polit.* 7.6). Thus gold and silver, acquired by Spartans, was deposited in Arcadia (Posidonius *FGrH* 87 fr 48c). In a later time the temple of Apollo in Delphi became a treasury for Spartan gold and silver.



The case of Sparta also supports the view that civic coinage was not always related to political power. The coinage of Argos gives further support to the above consideration. Argos was a powerful city in Peloponnesus. It was developed into a full *polis* from a very early period. Democracy was the political regime of Argos for most of the time. From the archaic to the classical era, Argos had employed a policy of expansionism which resulted in a sequence of wars with Sparta. However, the civic coinage was not prolific and not spread over a wide area.<sup>167</sup> The coinage of Argos did not prevail in international markets and did not enjoy high acceptability to be hoarded on a substantial scale.<sup>168</sup> Therefore we can argue that political power did not always result in prolific coinage.<sup>169</sup>

In addition, the coinage of the cities in Asia Minor provides an example of how autonomous coinage and political sovereignty were related. The cities of Ionia were under the Persian yoke for a long period in the fifth and fourth centuries. However, their coinage started as civic coinage of autonomous cities and remained such until the conquest of Alexander. The Persian rule did not prevent civic coinage. Moreover, the civic coinage of the Greek cities gave the pattern for certain satrapal issues. Many satrapal issues preserved the features of Greek coinage (see ch. 3).<sup>170</sup> Hence the

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<sup>167</sup> The earliest specimens of the Argive coins are found in the Isthmia hoard (11) (at the temple of Poseidon) with date of burial *ca.* 480 BC. Very few hoards from Greece contain coins of Argos (*IGCH* 11, 40, 51, 62).

<sup>168</sup> The beginning of the Argive coinage has been placed at the beginning of the fifth century. It was struck in small denominations with the triobol as the main denomination. In the fourth century didrachms and drachmae were additionally minted at Argos.

<sup>169</sup> The coinage of Argos is also informative about the principles of Greek coinage. The autonomous Greek *polis* issued coinage because public and private expenses required coined money, since a monetary economy operated in the *polis* by the end of the archaic era. Also, the sequence of the Greek wars and the new status of power derived from the wars kept the mints of many cities active. Thus the theory that Greek coinage was primarily the result of overseas trade seems to be inadequate.

<sup>170</sup> For instance, about the middle of the fourth century the mint of Lampsacus was used by the satrap Orontas and thus gold staters minted there with the portrait of the satrap (Kraay no. 922).

Persian rule did not affect the character and the volume of coin production in Asia Minor.

## 5. Emergency coinage

The mint of Athens provides us with emergency coinage.<sup>171</sup> Two emergency issues were struck in Athens because of emergencies caused by the Peloponnesian War. The first was a gold issue. The second was a bronze.

The gold emission was struck at Athens in 407 BC at a time of financial crisis because of severe defeats in the war.<sup>172</sup> Athens resumed emission of gold issues much later *ca.* 295 BC. The gold staters were supplemented by drachmae, triobols, diobols, obols and hemiobols. The ratio gold and silver at that time was 1:12.<sup>173</sup> For the minting of the gold issues the golden statues of Nikai (apart from one) were melted down (Hellanikos 323 *FGrH* fr. 28). Each of the golden Nikai was worth 2 T.<sup>174</sup>

The gold issue was followed by a bronze issue (Ar. *Frogs* 717, 725-6, *Eccl.* 815-22). In fact, it was bronze plated with silver.<sup>175</sup> Such an issue was not entirely new, since some tiny bronzes, probably Aristophanes' *kollyboi* (*Peace* ll. 199-201), were in

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<sup>171</sup> Some emissions have been considered as emergency assumed at times of military crisis. For instance, on the evidence of the Melos hoard (*IGCH* 27, burial *ca.* 416), which contains 100 silver staters with twenty-four different obverse types, it seems probable that the mint of Melos assumed a large emission shortly before the Athenian siege of the city. In addition, the only one stater, which comes from the mint of Mytilene, was struck in a period of crisis, probably during the siege of Mytilene by the Athenians on the basis of the poor quality of the alloy. See Healy (1958) pp. 1-10.

<sup>172</sup> The dies used for the staters were transferred to the Treasury of Athena (Inventory of Athena, 398/7 (*IG* II<sup>2</sup> 1408).

<sup>173</sup> At the rate 1:12 the gold stater was equal to 6 tetradrachms and the gold drachma was equal to 3 tetradrachms. See Robinson (1960) pp. 1-15. During the Archidamian war the ratio gold-silver was 1:14. After the end of the Peloponnesian War and some time around 402 BC the ratio gold-silver was very low: 1:11. But it was recovered to 1:12 afterwards.

<sup>174</sup> See Thompson (1944) pp. 173-209.

<sup>175</sup> Giovannini (1975) pp. 185-196 rejects the idea that the Athenians ever issued plated coins either at the end of the Peloponnesian War or at any other period of their history.

circulation, intended for petty exchanges, replacing very small silver denominations.<sup>176</sup> Plated coins were issued privately by individuals. But this particular bronze issue was official.<sup>177</sup> It circulated along with the gold issue. It is likely that the Piraeus hoard 1902, a hoard of plated drachmae and tetradrachms, represents these bronze emergency coins of the Athenian mint (also the Eleusis hoard 1973 consisted of many plated drachmae). Some evidence supports this assumption. According to Svoronos' initial description of the hoard (*JIAN* 21 (1927)), there are strong similarities in style between the plated coins of the hoards and the gold issues of 407/6 BC. The drachmae in the hoard were struck by 4 obverse and 4 reverse dies, which give a high number of dies. Thus only the official mint of Athens had the capacity to prepare a high number of dies. Small denominations are absent in the hoard, indicating that the minting of the plated coins was intended to be heavier than everyday transactions where forgeries were commonly used.<sup>178</sup> However, we cannot entirely dismiss the possibility that the hoard's subaerate coins were fabricated in workshops, since this was a pretty well established practice in the fifth century.

The issue of gold and bronze coins at Athens by the end of the Peloponnesian War illustrates two important aspects of Greek coinage, that is, first, emergency coinage and, second, contemporary circulation of two different coin-issues. The lack of silver and the large expenditure of the war forced the Athenians to abandon their traditional silver coinage and to use what metal was available to them. However, the so-called

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<sup>176</sup> In an early time Dionysios the *Chalcous* proposed the minting of bronzes but his proposal was dismissed by the Athenians (Athenaeus XV 669D). An issue of Attic bronze coins with the inscription AΘΗ instead of AΘΕ and with symbols as indicators of value (2 pellets for diobols, 1 pellet for obols) has been attributed to Timotheus' emergency issue (Ar. *Oec.* 1350a), since six specimens were found in the excavations at Olynthus (Robinson, Price (1967). Contra Giovannini (1975) pp. 185-196.

<sup>177</sup> In general, plated coins were private forgeries as well as official products of a mint. See Crawford (1968) pp. 55-59

<sup>178</sup> See Kroll (1996) pp. 139-146, id *GRBS* 17 (1976) pp. 329-341

emergency coinage was not a totally unfamiliar practice for the Athenians. It was always a potentiality, when necessary, as implied in Pericles' speech about the financial resources of Athens (Thuc. II 13).<sup>179</sup> The gold and the bronze issues were minted in order to serve different financial objectives. The gold coinage was intended to meet heavy expenses and to be used for foreign exchanges while the bronze issue was minted for domestic use.<sup>180</sup> Undoubtedly, the circulation of two distinct issues at the same time was neither a new phenomenon in the history of Athenian coinage nor the mere result of the emergencies of the war (e.g. the circulation of the 'Wappenmünzen' didrachms with the early 'owls' and thus 'Wappenmünzen' didrachms are found in hoards together with archaic owls).<sup>181</sup> The circulation of the gold and bronze issues did not put the previous silver issues out of circulation. The gold coinage was used for rebuilding the Athenian navy after the severe damages at Notium, for naval supplies and for financing military undertakings in the very wide area, where the war was fought at that time (see chapter 6). Such heavy expenses undoubtedly required payment in good gold coins.

The bronze coinage was acceptable by the Athenians only as an emergency coinage (it was the demos who voted for this issue).<sup>182</sup> The Greeks were very reluctant to accept bronze coinage. This becomes clear from a much later decree from Gortyn

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<sup>179</sup> Bronze coins were struck by the mint of Potidaea, when the city was under Athenian siege (432-29 BC). See Price (1968) pp. 90-104.

<sup>180</sup> See Thompson (1966) pp. 337-343.

<sup>181</sup> See Kroll (1981) pp. 1-32.

<sup>182</sup> In fact, it was ancient Greek mentality to regard bronze coinage as a coinage of 'necessity'. Athens began minting bronze coins on a regular basis much later than *ca.* 350 BC. The excavations in the Athenian Agora and, more specifically, the analysis of the industrial debris from the building of the city's mint showed that bronze coins were being struck in the building in the third and second century BC. See Kroll (1979) pp. 139-154. It is noticeable that a large square building in the south-east corner of the Athenian Agora has been identified as the Athenian mint for the striking of bronze coins from the fourth to the late first century BC, which might have been different from the so-called *argyrokopeion*. This reflects the Athenians' reluctance to accept a coinage of a base metal. Thus before the minting of bronze coins with the AΘE ethnic and Athena/owl types, the city of Athens minted bronze issues with the inscription EAEYΣI and Triptolemos/piglet types. See Camp II and Kroll (2001) pp. 127-162.

dated *ca.* 250/20 BC (*Inscriptiones Creticae IV* 162) which enforces the use of bronze coinage, issued by the city, under pain of 5 silver staters.<sup>183</sup> Bronze coins were used in transactions at the market place and in payments to the sailors. These token issues were in circulation until 393 BC (Xen. *Hell.* IV 8-10, Diod. XIV 85. 1-4), when the copper coinage had been demonetized. By that time Athens had resumed the minting of silver coinage.

## 6. Conclusions

(I) Greek coinage falls into two main categories, that is, civic and federal coinage. Some issues were also minted in Panhellenic sanctuaries and thus they functioned as festival coinage. Therefore coinage functioned in a broader political and economic spectrum than that of the *polis*.

(II) Greek coinage was not merely the product of the economic prosperity and the political importance of certain Greek cities, since small cities with meagre financial resources and an insignificant role in Greek politics (some of them did not find a place in Greek historians' narrative of Greek wars and politics) assumed coinage, even in an early time.

(III) The coinage of most cities falls into periods of high production, of periods of reduced minting activity and periods when coinage ceased. This was due either to economic decline or political crisis.

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<sup>183</sup> See Jackson (1971) pp. 37-51.

(IV) The coinage of the Greek cities originated, to a considerable degree, from civic needs for coined-money because of a monetized economy operating in the city. Thus the coinage of many cities intended to operate fiscal exigencies within a narrow geographical area and hence it did not travel long distances.

(V) Greek coinage was a phenomenon of political, economic and cultural interaction between the Greek *poleis*, planted in a wide geographical district from Italy and Sicily in the West to Asia Minor and to North Africa in the East. Also, the advanced culture of the eastern peoples, such as the Lydians, influenced Greek coinage at the time of its birth in the archaic period. This interaction explains why the Greek *poleis* adopted specific weights, coin-types and metals for their coinage at different stages of their coinage.

(VI) The character of the dominant coinage in certain areas led to creating economic zones which very often turned out to be, simultaneously, zones of common political objectives (e.g. Corinth and its colonies, the cities in Asia Minor and the islands in East Aegean).

(VII) The prolific coinage of some cities, its commercial credibility and its wide circulation affected the coinage of many other Greek cities. In the archaic period the Aeginetan coinage enjoyed high credibility and circulation and thus an outstanding number of Greek cities adopted the Aeginetan standard and modelled their early coinage on the Aeginetan coinage (fabric, shape of flans, reverse type). Then the Athenian 'owls' achieved high acceptability and spread widely. The Attic standard was adopted by many cities under Athenian economic and political influence.

Moreover, some stylistic details of the Athenian coin-types appeared on the coinage of certain cities (e.g. on the coinage of Samos). However, this practice was not that extensive and did not last as long as someone would expect.

(VIII) The early coinage was intended to meet large expenditures and thus the early mints produced coins of large denominations (e.g. the heavy electrum stater). This does not indicate that archaic coinage was assumed for large-scale trade (though such an objective cannot be excluded altogether). Probably such an objective operated the early Aeginetan coinage. It foremost indicates that the use of coined-money was felt primarily in large payments and it was, mainly, related to public economy. This means that the monetization of the economy of the Greek cities was a procedure which began with high state expenditure and then gradually operated smaller transactions. Moreover, such a procedure was closely related to the ideological perception of coined-money and its role within society by the Greeks, their poets, their philosophers and their historians. For this reason, most of the Greek cities assumed coinage in bronze in a relatively late period, when the Greek economy was completely a monetary economy.

(IX) The study of Greek coinage proves that the Greek economy was a moneyed economy from an earlier period of time than it was usually assumed. We saw that the majority of cities minted fractions from a period very close to the beginning of their minting. Also, fractions are found in some archaic hoards. This means that money-based institutions operated public economy from the end of the archaic period. Moreover, on this evidence we can argue that the Greek economy was a rational

sector in the structure of the Greek *polis* and Greek coinage at large served the principles of the Greek economy.

(X) Greek coinage was, among others, the offspring of political independence. The minting cities had reached the structure of the *polis* and this was demonstrated by the ethnic inscribed on their coins. Earlier development of communities to a *polis* means earlier beginning of their civic coinage. However, political independence was not proved as guarantee for uninterrupted coinage. Autonomous cities ceased their coinage because of economic decline. Furthermore, autonomous cities assumed coinage in a late period, when they enjoyed a relatively prosperous economy and possessed the means for coinage.

(XI) Political sovereignty, more specifically, the Athenian *arche* and the Persian Empire, affected the coinage of the Greek world. However, loss of political sovereignty did not result in the cessation of civic coinage. Political dominance did not result in the monopoly of a certain currency. The Athenian *arche* created a zone of economic interests and this affected the economy of some Greek cities and their coinage. Similarly, the Athenian *arche* created a sphere of political influence and this also affected Greek coinage in respect of its form and the destination of its circulation. As for the Persian Empire, restrictions in the coinage assumed in regions under Persian rule are not found. The high quality and the acceptability of the regal Persian silver and gold coinage affected the coinage of the Greek cities, which were in political and economic relation with the empire and under Persian rule for long periods, especially after the King's Peace in 387 BC. In this way, the Greek cities



made their coinage more compatible and competitive with the regal Persian in order to maintain a prosperous economy.

## CHAPTER THREE

### *Macedonian and Persian coinage and the polis economy*

#### **1. Introduction**

In the previous chapter we dealt with the *polis* coinage as evidence of its economic policies. The main concern of this thesis is with the economy of the Greek *polis* and its perception by the *polis* historians. However, the Greek *polis* is not ‘frozen’ throughout the classical era. On the contrary, the long period of Greek history covered by our *Histories* from the Greek victory over the barbarians achieved through the co-operation of the independent Greek city-states to a period of exhausting wars between the Greek cities and the emergence of different hegemonies, makes clear how the ground is prepared for the dissolution of this political structure in order to give way to a new type of government and leadership in the Greek world. A new era begins with the dominance of the Macedonians under Philip II on the Greek stage and then with Alexander the Great. A new form of political organisation, that of the Hellenistic kingdom, therefore appears. For this reason we hope that we will understand better the Greek economy, the ‘behaviour’ of Greek coinage and their perception in Greek historiography, if we incorporate in this study the coinage of the Macedonians.

Let me explain my choice. The ancient Greeks were able to understand things through the perception of the ‘others’. Contrasting things and underlining their different aspects became the means for defining themselves and their Greekness, in other

words, their identity. Undoubtedly, the ‘invention’ of the barbarians played a significant role in understanding and evaluating their culture.<sup>184</sup> Finally, in the era of Isocrates (Is. *Paneg.* 50) the Greeks attempted to understand what was ‘Greek’ in relation to Greek civilisation.<sup>185</sup> It thus seems plausible that any understanding of the economic practices of the Greek city-states is reinforced by the study of such practices by those peoples who lay on the fringes of the Greek world, namely the Macedonians. Moreover, the Macedonians and their political and cultural development during the classical period are an integral part of the politics exercised by the Greek cities and, furthermore, of the expansion of Hellenism. Taking a step further, we can argue that the history of Macedonia is closely related to the history of the Greek cities. Therefore, the different organisation of these peoples in tribes or kingdoms and hence the different political regime shed light upon the structure of the Greek *poleis*, whose history is our historians’ main concern. Finally, the ‘behaviour’ of the Macedonian coinage reveals a close relation to the coinage of the Greek *poleis* and its economic role and thus the study of the Macedonian coinage assists in understanding the Greek economy as an autonomous system within the *polis* institutions.

In this chapter, first, I deal with Macedonian coinage addressing a set of questions in order to discuss economic practices employed by the Macedonians and to connect

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<sup>184</sup> See Hall (1987). In general, the perception of the world by the Greeks through the notion of *antithesis* is evident in their writings, for example in the Hippocratic corpus, in particular, in *Airs, Waters, Places*.

<sup>185</sup> Greek identity is perceived in the framework of Greek culture in relation to the political constitution of the *polis* (Ar. *Pol.* 1253b-1255b, 1277b-1288b): See Schneider (1999) pp. 1-15. The dissolution of the Greek *polis* makes Greek *paideia* the core of Hellenism. For instance, the structure of the Gymnasium in the Hellenistic age reflects such a perception of ‘Greekness’. Certain gymnasiarchal laws give a picture of the structure of the Gymnasium and its ideals. For example, in the gymnasiarchal law of Beroia (mid. 2<sup>nd</sup> c. BC) there is a list of those debarred from the Gymnasium: freedmen or freedmen’s sons, pederasts, traders, drunkards, madmen (1.26-7): See Cormack (1977) pp. 139-149, Gauthier, Hatzopoulos (1993). Also, the honorary decree for the Gymnasiarch Philippos, Amphipolis, 108/7 BC (*SEG XXX* 546).

Macedonian coinage and its 'behaviour' with the coinage of central Greece and the economic practices developed there.

Second, I deal with Persian coinage, since I can ignore neither Herodotus' account of the Persian Empire nor the influence of Persian money on the policy of the Greek cities, as emerges from Thucydides' and Xenophon's history. By studying Persian coinage and its role in the Greek world we hope to understand better to what extent the historians' view of the role of Persian money in the Greek world was influenced by the predominant ideology about the Persian Empire and its abundant wealth. Moreover, in this way we will be able to judge any disparity between the reality of the *polis* economy and its interpretation by the historians.

## **2. The coinage of the Macedonian tribes**

Dealing with the tribal coinage of Macedonia, I addressed the following questions:

- (i) Why did these peoples issue coins?<sup>186</sup>
- (ii) What does the striking of silver and electrum coins and the variety of their denominations imply?
- (iii) How can the types and the inscribed legends be interpreted?

The tribes in Macedonia struck coins due to the abundance of precious metals in the area. Mining was predominantly in the hands of native tribes for a long period of time. Probably the huge number of golden articles that excavations in the region

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<sup>186</sup> This question is addressed by students of Greek coinage in respect of the Greek *polis*. The answer to this question is, in my view, manifold, since the structure of the *polis* is more complex than that of the tribal kingdoms. See Howgego, (1990), pp. 1-25, Crawford, (1970) pp. 40-48, Martin, (1995) pp. 257-291, id (1996) pp. 257-291, Salmon, (1999) pp. 147-167.

brought to light could be explained on this ground. Objects of precious metals had a specific role in a society related to societal hierarchy and to religious cults. So we can argue that, in the same way, coins served certain needs of the community. However, the issued coins might have been treated as bullion, finding their way to the markets of the east, that is, Persia and Egypt. This practice was probably associated with the ways of the use of gold by the Persians, their conception of wealth, their state organisation within which gold and wealth, in general, was distributed to the very few. The evidence of the hoards supports such a statement, for the bulk of the tribal coins are found in Jordan, Syria and Egypt.

Archaic coins of Derrones, Bisaltae and Orrescii are found in a hoard in S.Serbia (*IGCH* 355). Nine specimens of Derrones' coinage came from the Velickovo hoard, Pazardjik region, Bulgaria (*IGCH* 690).<sup>187</sup> One stater of Orrescii and one stater of Lete come from the Nevrokop hoard (*IGCH* 692, 593). Also, in the North coins of Bisaltae and Bottiaean are found at Olynthus.<sup>188</sup> The hoards in Levant give 12 staters of Lete and 15 uncertain Thraco-Macedonian staters from the archaic period (Ras Shamra, *IGCH* 1478) along with 2 octadrachms of Getas, king of the Edoni (Seleucis, *IGCH* 1480). In the same area 1 stater of Aegae, 2 octadrachms of Bisaltae, 1 tribal octadrachm with TVN (Jordan, *IGCH* 1482) dated in the classical period and, additionally, 1 octadrachm of Bisaltae with another tribal octadrachm from the Massyaf hoard (*IGCH* 1483) were found. In hoards in Egypt 1 archaic octadrachm of Bisaltae, 1 archaic stater of Lete and 2 archaic Thraco-Macedonian staters were found

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<sup>187</sup> These coins have been classified as decadrachms. Instead Youroukova (1976)) classifies them as tetrastaters on the ground of their weight. The weight of the specimens varies from 38.90 g to 40.65 g and thus if, according to the Thraco-Macedonian standard, the weight of stater is 9.82 g, then (4 . 9.82) they are tetrastaters. Also, 2 staters of the Tynteni, 1/4 stater of the Derrones are found in Bulgaria, the Sadorik hoard, region of Pernik. See Youroukova (1983) pp. 27-38.

<sup>188</sup> Robinson (1933).

(Mit Rahineh, *IGCH* 1636). In the Demanhur hoard 34 staters out of a total of 165 coins are Thraco-Macedonian (*IGCH* 1637). The Benha el Asl hoard (*IGCH* 1640) provide us with 3 staters of Orrescii, 10 staters of Lete and 2 Thraco-Macedonian tetradrachms. One Thraco-Macedonian stater and 1 stater of Lete is found in the Delta hoard (*IGCH* 1638) and 8 Thraco-Macedonian staters in the Sakha one (*IGCH* 1639). In the Zagazig hoard (*IGCH* 1645) the Thraco-Macedonian coins are represented with 2 octadrachms of Derrones and 2 Thraco-Macedonian tetradrachms of Pegasus type and 1 stater of the Centaur and Nymphe type. In the Fayum hoard 1 stater of Orrescii is found.<sup>189</sup>

We draw attention to the following hoards. First, the Asyut hoard is important in respect of the considerable number of tribal coins found there namely, 32 staters of Orrescii, 4 octadrachms of Ichnae, 10 octadrachms of Derrones along with two other coins, probably 1 dodecadrachm and 1 triobol. The findings of the Asyut hoard suggested lower dates for Derrones' coins, that is, 480 BC rather than 500 BC and the same for Ichnae.<sup>190</sup> Second, in the so-called Decadrachm Hoard tribal coinage is represented with 68 octadrachms of the Bisaltae (struck from 26 obv. and 45 rev. dies), 3 octadrachms of Getas, King of the Edoni (struck from 3 different obv. and rev. dies), 1 octadrachm of the Derrones belonging to the triskeles series, 1 stater of Tynteni, 1 of Derrones, 1 of Ichnae and 2 of Orescii. Since the Asyut hoard does not contain coins of the Bisaltai the date suggested for the Decadrachm Hoard tribal coins is after 475 BC (475-460 BC) with the exception of those of Orrescii.<sup>191</sup>

<sup>189</sup> The percentage of Thraco-Macedonian coins is high in hoards in Egypt. Demahnur 38%, Benha 47.5 %, Asyut 24%, Zagazig 27%. Price and Waggoner (1975).

<sup>190</sup> Price and Waggoner (1975).

<sup>191</sup> Fried (1987) pp. 1-20, Kagan (1981) pp. 21-28. The hoard is a unique one as most of the coins are uncirculated and arrived at the place of burial as a single group.

From the distribution of tribal coins in the hoards we can say that tribal coins figure among abundant coins from Greek cities in the Northern region. For example, in Zagazig hoard the 2 octadrachms of Derrones were hoarded with coins from Acanthus, Mende, Potidaea, Terone and Dicaea. Similarly, in Fayum hoard the stater of Orrescii was found among coins from Acanthus, Mende and Neapolis. Also, at Olynthus findings of coins from the Chalcidic peninsula are dominant. Therefore tribal coins were in circulation along with coins of the Greek cities and also stuff for emergency or saving hoarding.

The coinage of the Greek cities in the coastal area might have provided the pattern for tribal coinage.<sup>192</sup> Also, contact between the tribes and the Greeks in the area and the specific needs because of the established relations between them and the Greeks provides the network within which tribal coinage was to function.

Gold, silver or electrum coin-issues reveal a sophisticated practice (similar to the Greek *poleis*), according to which tribes meet different financial needs. Thus gold coins were used for dealings with Persia (commerce or tribute), where the gold darics were in circulation and gold was highly appreciated in any form, silver ones for dealings with the Greek cities, mainly, in the North (findings of tribal coins in hoards in metropolitan Greece are not recorded), where silver coins were predominantly issued and circulated. Besides, this practice indicates that the coinage of the tribes was rooted in their political and economic organisation. In other words, tribes issued coins in order to meet specific social and economic needs and it is why their coinage was a multifold phenomenon.

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<sup>192</sup> It is possible that the contribution of the Greeks in the Northern area was technological. Archibald ch. 4.4

A similar pattern may explain the striking of coins in a variety of denominations. A considerable number of the tribal coins were issues of large denominations and thus were heavy. For instance, the weight of issues of the Derrones from Velitchkovo hoard (Youroukova Pl. I, II) varies from 40.65 gm to 38.90 gm. The octadrachm of the Edoni (PC I.B.16) weighs 28.02 gm and the octadrachm of the Bisaltai (BMC Bis.2) weighs 27.39 gm. The 6drachm of Ichnai weighs 29.27 gm and the 8drachm of Derrones 41.21 gm. Thus very heavy coins should take a long route of commerce east as bullion. Along with the heavy coins, there existed issues of small denominations. For example, the stater of Zaeelii (PC I.B.3) weighs 9.15 gm, the diobol of Lete (BMC Let.28) weighs 0.90 gm and a drachma of Eion weighs 4.08 gm. Lighter coins might have served in the commercial activities with the Greek cities in the region and, possibly in activities between the tribes themselves. Small fractions as  $\frac{1}{2}$  ob (0.53 gm) of Bisaltae fit a pattern of local commerce.<sup>193</sup> Finally, the employed standards in tribal coins allow conversion into issues of international credibility. Youroukova (1976) argues that the conversion of the tetrastaters (according to her classification, traditionally classified as 10drachms) into darics and electrum staters was possible.<sup>194</sup>

The legends inscribed on the coins bear the name of the tribe and the name of their king. So we have ΔΕΡΡΟΝΙΚΟΝ for the Derrones (on some of their coins appears the inscription ΔΕΡΡΟΝΙ), ΟΡΗΣΚΙΟΝ and ΟΡΡΗΣΚΙΟΝ for the Orrescians, ΒΙΣΑΛΤΙΚΟΝ ΑΡΓΥΡΙΟΝ (obv) with ΜΩΣΣΕΟ or ΜΟΣΣΕΟ (rev) which stands for the name of an (unknown) king or ΒΙΣΑΛΤΙΚΩΝ for the Bisaltai. On coins of Zaeelii the name ΖΑΙΕΛΙΟΝ is inscribed. Names of kings are inscribed on the 8drachms and

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<sup>193</sup> Svoronos (1919). 'Tableau Metrologique'.

<sup>194</sup> Archibald (1998) p. 115 argues for the close minting connections between Greek, Macedonian and tribal issues on the basis of the use of Greek letters, of shared devices and of a corresponding weight system.



4drachms of Derrones as ΕΥΕΡΓΕΤΗΣ. The legend ΓΕΤΑΣ ΗΔΟΝΕΟΝ ΒΑΣΙΛΕΥΣ (ΓΕΤΑ ΒΑΣΙΛΕΥ ΗΔΟΝΕΩΝ) is a speaking example of the practices of the tribes concerning coinage.<sup>195</sup> Also, the inscription ΔΕΡΩΝΑΙΟΣ around the image of Apollo (obv) on the 4drachm of the Paeonian king Lyceius (359-40BC) indicates the local cult of the god. The legends bearing ethnic names indicate the ethnic identity and political independence of these peoples from the archaic period to their conquest by Philip II. At the same time, the legends reveal the organisation of the Macedonians into distinct kingdoms, a constitution totally different from that of the Greek *polis*. Despite their different political structure, they used the model of the Greek cities to declare their political identity.

Tribal coinage ceased to be issued in the period after 465 BC. The output of tribal coinage, although prolific in many cases as that of Bisaltai, is classified in two phases of evolution. The first is in the period *ca.* 510-480 and the second after the withdrawal of the Persian army from the area, namely from 475 to 465 BC. The cessation of the tribal coinage has been attributed to the dominance of the Athenians on the territory occupied by the tribes and to the expansion of the Macedonians in the area. Archibald (1998) p. 115 points out that this phenomenon could be connected with the changed position of Thasos after the suppression of its revolt by the Athenians in 465 which 'destroyed the *raison d' être* of tribal coins or the network which enabled them to function'.<sup>196</sup>

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<sup>195</sup> The inscribed names of the rulers on the tribal coins may be explained as an influence from the coinage of Alexander I. See Tačeva (1992) pp. 58-74.

<sup>196</sup> Picard (2002) p. 17 relates the cessation of tribal coinage to the withdrawal of the Persians from the area. Tribes ceased to pay tribute and thus the *raison d' être* of tribal coinage was destroyed.

The above argument explains well the disappearance of tribal coinage but some of the tribes preserved their independence until Philip's conquest but they did not issue coins after 465 BC. What I want to flesh out is that coinage in the framework of ancient economic practices is not merely an indicator of political independence. It is true that cities and tribes declare their identity and their independence on their coins but they do not always issue coins when they are political independent. And this applies to tribal coinage.

The images of the tribal coinage reveal their links with the geography, the natural environment and the cults of the area. Thus the rose on the coins of Anthemus may be associated with the well known gardens of roses in Pangaion. Also, the lion on the coins of the Pernaioi of Pangaion corresponds to Herodotus' reference to 'many lions and wild bulls' in the area describing Xerxes' route in Macedonia (VII.126). A lion forms a symbol on Amphipolis' coins (Type B and C, Group 2).<sup>197</sup> The Macedonian rider dominates certain series of coinage. It is found on the coins of Bisaltae and of Graiaians. Undoubtedly, it is an image which Thracian kings (e.g. Seuthes), Greek cities in Chalcidice (e.g. Potidaia and Sermyle) and other Greek cities (e.g. Gela, Himera and Larissa) share. The motif of horseman and of horse is also dominant on Macedonian regal coins. Horse breeding was common among the peoples in the North. Moreover, the cavalry of the tribes in the North was vital to their warfare tactics. Herdsman with two oxen and warrior with horse is a frequent image on tribal coins (e.g. Orrescii, Ichnai and Bisaltai).

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<sup>197</sup> Lorber's (1990) classification.

The images on coins are often related to local religious cults.<sup>198</sup> Dionysus' worship originates from the North. Thus the motif of the Silenus holding a Nymph is frequent in the tribal coinage and defines a specific type of this coinage (e.g. Orrescii, Zaeelii and Lete). Undoubtedly, it is a common motif on the coins of certain cities in the Chalcidic peninsula as Lete and Mende and Greek cities in the North. In particular, Thasos' 'Satyr and Nymph' coin type possibly offered the archetype for many tribal coins of a similar type due to the established economic and cultural status of the island in the region. Also, Silenus and Nymph are met on Thracian regal coins (e.g. on coins with the legend Bergaeus (ΒΕΡΓ)). Greek mythology is perfectly embodied in tribal coinage. Pegasus is met on the coinage of the Crestonians, of Myrkinos and of Therma and the griffin on the coinage of the Ionii of Pangaion relating their coinage with that of certain Greek cities, for Pegasus is the symbol of Corinth's coins and the griffin of those of Abdera. Similarly, the Greek pantheon is found on tribal coins as on the regal coinage of the Paionians. The god Ares is represented on the coins of Ichnai. Hermes is depicted on the coins of Derrones.

The rich iconography of the tribal coinage illustrates many aspects of the political and social organisation of these tribes which are known in the course of history through their coins and, moreover, give evidence for a more complex political structure and more advanced material culture than it had been assumed out of lack of evidence for their history.<sup>199</sup> Also, the common elements, shared between the tribal coinage and the

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<sup>198</sup> Price (1974).

<sup>199</sup> It has been argued that a certain monetary alliance between the peoples of Macedonia took place and a particular type of coin was issued within it. Svoronos (1919): 'The Alliance of Pangaion'. If this assumption was right, then an advanced economic practice could be applied to these peoples. Nevertheless I can find neither the reason for such an alliance nor the network of its function. It is unlikely for people without a common ethnic identity or political organisation to advance a monetary alliance in such an early time. Later a monetary treaty was agreed between Mytilene and Phocaea (Tod II, 112), according to which the two cities were to coin electrum in alternative years. See Bodensstedt (1981). The agreement between the two cities was based, in my view, on economic ends. But it was not

coinage of the Greek cities, reassert the pattern of mutual cultural and economic interaction. Finally, the images depicted on the tribal coins contain cultural features set by the Greeks and the peoples of Macedonia showing thus a progressive hellenization of the area in the framework of the cultural unity of the Greek world. In conclusion, tribal coinage functions in the economic and political network of the region and follows the pattern of Greek coinage.

### **3. The coinage of the Macedonian kings**

The main questions we address are the following: (i) how can we explain the variety of weights and denominations employed by the Macedonian kings?; (ii) does the regal Macedonian coinage reveal a development of the Macedonian economy?

The variety of weights, the mixture of Oriental and Greek weights conforms to the close relations of Macedonia with Greece and Asia. The routes of trade determine the choice of the standards since the particular weight of a coin depends on foreign needs in the course of trade. However, the employment of particular weights by the Macedonians served other objectives than that of trade orientation. In particular, the standards employed by the Greek cities in the North at a particular time might have influenced the employment of a specific standard by the Macedonian kings. Credibility was also the required end of issued coins. So the credibility of the coinage

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always the case with monetary alliances. For example, the so-called ΣΥΝ (ΣΥΝΜΑΧΩΝ, ΣΥΝΜΑΧΙΚΟΝ) coinage, which was issued jointly by the mints of Rhodes, Cnidus, Iasus, Samos, Ephesus, Byzantium, Cyzicus and probably Lampsacus has been regarded either as the product of an economic alliance or of a military alliance. Scholarship on ΣΥΝ issue focuses on its date either in 404 BC or in 394 BC and whether it demonstrates a pro-Spartan or an anti-Spartan policy. See Cawkwell (1956) pp. 69-75, Karwiese (1980) pp. 1-27.

of Greek cities, struck on certain standards, provided an example for Macedonian regal coinage. Archelaus' new coin, the stater (sometimes called didrachm, identified with the pentadrachm: Polyæn. *Strateg.* III.10.14) enhances the assumptions that weigh standards did not depend only on trade routes. His standard can be regarded as a local standard since there is no clear relation to other contemporary standards and therefore these coins had been designed for domestic use.<sup>200</sup>

What is worth noting with the standards adopted by the Macedonian kings is that they were often used to implement effective economic policies. More specifically, the lowering of a standard was often the practice of kings as was the reduction of standards by Archelaus.<sup>201</sup> Such devices demonstrate a sophisticated practice employed by kings in order to meet very specific needs. Thus the regal Macedonian coinage was dependent on the kings' financial resources and the needs of the communities with which they came into contact. The variety in weighs and denominations was based on the need to produce a currency exchangeable with the most influential currencies of their time. If we consider Alexander's coinage we will observe that his tetradrachm could be exchanged with the Attic drachma at the rate of 4:3 and the light tetrobol was equivalent to an Attic tetrobol.<sup>202</sup> The Macedonian kings in the earlier stages of their coinage (Alexander I) had used denominations used by the tribes. Perdiccas II issued only tetrobols and fractions.<sup>203</sup> These aspects of the

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<sup>200</sup> See Westermarck (1973) pp. 17-30.

<sup>201</sup> Westermarck (1973) pp. 301-315.

<sup>202</sup> Raymond (1953). In general, a sort of 'economic reform' is applied to Archelaus' coinage, which has been explained either as the result of the circulation of Persian darics or as a result of a debasement of his coinage. See Poullos, *Ancient Macedonia* (1988) pp. 53-60.

<sup>203</sup> The heavy tetrobols had a theoretical weight of 2.45 gm and were of a good silver alloy, while the light tetrobols had a theoretical weight of 2.18 gm and were of a poorer alloy. It has been argued that the heavy tetrobols were used primarily for external trade while the light tetrobols were used mostly internally. Kraay (1976) p. 142. A fifth century circulation hoard of Macedonian tetrobols gives evidence of the use and the circulation of Macedonian light tetrobols. The hoard consisted of 196 regal light tetrobols and 1 heavy tetrobol out of a total of 223 specimens. The tetrobols in the hoard are

Macedonian coinage show the economic and political development of the area, since commercial activities between the local peoples and the Greeks, who constantly intervene in the area, were at work.

The regal coined silver might have always been treated as bullion exported to the Persian Empire. This was probably due to the strong military and economic presence of the Persians in Macedonia during the fifth century but, mostly, to the traditional trade between the North and the East. The spread of Macedonian coins in the East on the basis of hoards is an indicator of that.<sup>204</sup> Moreover, the melting of foreign currency to produce local currency is a practice of sophisticated monetary systems.<sup>205</sup>

The types of Macedonian coins were regal from 480/79 BC. There existed neither ethnic name nor magistrate's name.<sup>206</sup> This is an indication of Macedonian political institutions. It distinguishes them from the Greek cities' coinage since ethnic names are to be found on their coins, reflecting the constitution of the *polis* and, in some cases, its democratic institutions.

What captures the attention of a student of regal Macedonian coinage is the variety of types and more specifically the type on the reverse. Each of the Macedonian kings used an obverse type and different types for the reverse. Whereas a sort of conservatism is found on the reverse types of Greek city-states' coins, a variety of types is applied to regal coins. How could this practice be explained?

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mostly issues of Alexander I and Perdiccas II. The number of the light tetrobols, represented in the hoard, assists in the view of wide internal circulation of the regal light tetrobols. See Hersh (1991) pp. 3-20.

<sup>204</sup> Hoards in Jordan (*IGCH* 1482), in Egypt (*IGCH* 1654, 1656)

<sup>205</sup> For example, the monetary law of Olbia in the fourth century (*Epigr.* I, 7).

<sup>206</sup> It was much later in the second century BC when the ethnic ΜΑΚΕΔΟΝΩΝ is found on Macedonian coins.

First, I think, it was related to the political status and the power of the royal authority. The system of succession to the Macedonian throne was vulnerable and thus the reign of certain kings was brief while regents and pretenders often claimed sovereignty.<sup>207</sup> In a sense, the elaborated types of their coins assert the legitimacy of their authority. To make it more clear, pretenders of the Macedonian throne had to present themselves in front of the Macedonian assembly in order to acquire the royal authority.<sup>208</sup> Minting coins was probably a means to enhance their claim to the throne. It seems plausible that their attempt to ascend to the Macedonian throne in many cases demanded military force. Hence coined money was needed for the pay of mercenaries. In this respect, some of the Macedonian coins have been attributed to pretenders rather than to kings.<sup>209</sup> Second, the Macedonian coinage until the time of Philip II had not enjoyed such a degree of credibility as to insist on stable reverse types. Finally, it corresponds to the attempt of the Macedonians to improve their Hellenic identity and to find a place in the Greek world.

A particular type of regal coinage should receive attention, that is, of the Macedonian rider and of the horse alone. These images appear on the coins of all the kings, that is, in chronological order, of Alexander, Perdiccas II, Archelaus, Perdiccas III, Aeropus, Amyntas IV and Philip II.<sup>210</sup> On the staters of Philip the variation of a racing chariot is interesting with all the implications to his victory at the Olympic Games. Some

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<sup>207</sup> See Hatzopoulos, *Ancient Macedonia IV* pp. 279-292. His main points are, first, direct succession from father to son, birth 'in the purple' and not seniority were the general principles inspiring the customary rules that regulated succession. Second, a succession was not effective until it had been solemnly ratified by the Macedonian Assembly.

<sup>208</sup> See Hatzopoulos (1996) pp. 261-322.

<sup>209</sup> For example, a series of coins attributed traditionally to the king Pausanias has been regarded as issues of the pretender Pausanias. See Miller (1986) pp. 23-27.

<sup>210</sup> The variations of this type on coins of different series is nicely represented on the coins found in a hoard in Pella, where regal coinage is represented with 324 specimens out of a total of 336. The rest belong to the coinage of Chalcidian cities. See Chrysostomou, *Ancient Macedonia I*. pp. 621-644. For the Macedonian rider see Picard (1986) pp. 67-75.

explanations for the use of this particular image were given above in respect of the tribal coinage. However, in my view, horseman and horse on the Macedonian coins originate from the very structure of the Macedonian aristocracy. Breeding horses was an occupation of the upper strata of classical Greek society. Aristophanes *Clouds* gives a good account of the traditional aristocratic occupation of *ὑπικίην* in respect of the Athenian society.<sup>211</sup> Moreover, affording horse-rearing on a scale sufficient to compete at Panhellenic Festivals was part of the social thinking of the propertied families in classical Athens.<sup>212</sup> Macedonian aristocracy was engaged in activities as horse-breeding and chariot races. Excavations in Macedonia brought to light certain metallic objects which have been characterised as ‘horse implements’.<sup>213</sup> Besides, the Macedonian society did not experience the changes which the cities of Greece proper had experienced after the Peloponnesian War and in the course of continuous conflicts during the fourth century and therefore Macedonian aristocracy conformed to the pattern of aristocracy of the fifth century Greek *polis*.

The issuing of bronze coins in the first half of the fourth century by Macedonian kings implies the presence of a local market. It might also have been connected with the urbanisation of Macedonia and the development of certain places into cities. Some rare bronze Macedonian coins, found in Thessaly and Olynthus, require attention. The head of Zeus forms the obverse types of these coins while Demeter in long chiton seated on a backless chair with a phiale in the right hand and a sceptre in the left is the

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<sup>211</sup> From Arist. *Clouds* ll. 61-7 it emerges that personal names with the suffix *-ippides* have aristocratic connotations and are suitable to the *agathoi*.

<sup>212</sup> See Davies (1981) pp. 101ff and Appendix III. Wealthy Athenians changed their attitude to horse-rearing at a time after the Peloponnesian War and therefore a few horse-entries at Panhellenic Games are recorded. Equestrian competition takes place in Sparta. The victory stele dedicated by Damonon to Athena (from the Spartan Acropolis, SM 440) is evidence for wealthy Spartans who afforded horse breeding and of equestrian contests taking place at festivals within Spartan territory. On the relief of the stele a four-horse chariot is depicted. See Hodkinson (2000) pp. 303-333.

<sup>213</sup> Papakonstantinou-Diamantourou (1998) pp. 189-196.



reverse type. The inscription ΔΙΑΩΝ or ΔΙΑΟΝ is met on the reverse. These rare bronze coins have been attributed to Dion, that is, to the religious and cultural centre of the Macedonian kings. Any emission of Dion's mint is not recorded before the foundation of the Roman colony (second half of the first century BC). Therefore, these bronze coins belong to a short-lived emission related probably to religious festivals in Dion.<sup>214</sup> We can say that bronze coinage was intended for local needs for coined money and, at the same time, reveals the incorporation of money in Macedonian society.

It was the coinage of Philip II that inaugurated a new era for Macedonian coinage. The abundance of his coins in many hoards along with their exclusive presence in some of them speak not only of his prolific coinage but, simultaneously, of its established use in certain markets.<sup>215</sup> At least two mints in Pella and Amphipolis served Philip's need for coinage.<sup>216</sup> He issued gold coins which possess a dominant position in the history of ancient coinage (as the Persian darics: Horace *Epist.* II 1.232-4). This particular initiative can be explained in the framework of his political expansion to Greece proper and hence can be regarded as a demonstration of his political identity. Bronze coins were also struck in the name of Philip. Bronze coins in the name of Philip II were issued until the reign of Philip Arrhideus.<sup>217</sup>

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<sup>214</sup> See Demetriadi (1998) pp. 115-117.

<sup>215</sup> Territorial allocation of the hoards with exclusively Philip's coins: I. Macedonia: Nikisiani, (*IGCH* 387), Proti (*IGCH* 388), Northern Greece (*IGCH* 389); II. Rumania: Preajba de Padure (*IGCH* 390); III. Bulgaria: Careva Poljana (*IGCH* 727), Sredec (*IGCH* 728), Dupnica (*IGCH* 729), Popovo (*IGCH* 730), Aleksandrovo (*IGCH* 731), Gorica (*IGCH* 732), Kitno (*IGCH* 733).

<sup>216</sup> Price (1979) pp. 230-241, Le Rider (1996).

<sup>217</sup> The long tradition of issuing bronze coins on the name of Philip II and the wide circulation of these bronze issues resulted in the striking of bronze coins on Macedonian 'bronzes' by the mints of certain cities. The study of a number of bronze coins issued by the Acarnanian cities (Leukas, Alyzia and Argos Amphiloichikon) led to the assumption that many of these coins were overstruck on Macedonian bronzes. See Kremmydi-Sisilianou (1997) pp. 61-77.

A major problem is what Philip did in respect of the civic coinage of the conquered cities. The case of Amphipolis provides a good study-case. After its conquest by Philip, the city continues for a period of time to strike coins which bear the name of the city (rev) and of the issuing authority.<sup>218</sup> Therefore Amphipolis carried on issuing civic coins after Philip's conquest because it served the king's policy towards the Greek cities. The brutality which often accompanied the conquest of several Greek cities does not necessarily imply the destruction of their institutions. Their institutions and advanced economic practices assisted Philip in developing his country in order to secure his *arche*. The royal mint in Amphipolis led to the cessation of the civic coinage since the mint was engaged in issuing regal coins. But how rapid was the transformation of Amphipolis into a Macedonian city of predominant status? I think that it was rapid due to the Macedonian settlers and Philip's political conduct because of the city's political and financial importance in the region.<sup>219</sup>

On the evidence of inscriptions found in Amphipolis concerning 'buying and selling' we can also argue that the silver drachmae of the civic coins were gradually substituted by the gold staters of Philip in the transactions taking place in the city.<sup>220</sup> More specifically, whereas in the first six inscriptions out of a total of twelve the prices are expressed in drachmae, in the last ones which are dated after the second half of the third century (*ca.* 250) the prices are expressed in 'στατήρων χρυσών φιλιππειών' and in some cases (act no. 7) in 'ημιστατήρων'.<sup>221</sup> But in the sixth

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<sup>218</sup> Lorber (1990). The Ionic ending -ΤΕΩΝ of the ethnic legend on the earlier coins is turned into the Attic ending -ΤΩΝ. It has been explained either as the outcome of certain political preferences or as the result of the use of the Attic dialect by the Macedonian authorities established there. Moreover, the legend reveals the process towards the *koine*.

<sup>219</sup> Picard (1994) pp. 207-214.

<sup>220</sup> Hatzopoulos (1991).

<sup>221</sup> On the evidence of these deeds of sale, the ratio between Philip's stater and the civic silver drachma was 1:20. See Hatzopoulos (1991) pp. 79-87.

inscription the price is expressed in drachmae (ll. 4-5), although it is dated after the city's annexation to Macedonia, possibly implying a stage of transmission. The city of Philippi however provides a different example from that of Amphipolis. Although a Macedonian city, it continues to mint coins on the ethnic ΦΙΛΙΠΠΙΩΝ.

The coinage of Philip contributed to a developing economy as we have argued before. He was in need to run a sophisticated economy in order to fulfil his imperialistic ambitions and in order to exercise a successful diplomacy. Moreover, finance is always a fundamental element in building an empire. The pattern of the Athenian empire shows the importance of finances for an *arche*. In conclusion, Philip's prolific coinage and the issue of gold staters were related to the development of the Macedonian economy.

#### **4. The coinage of the Greek cities in the North**

Regarding the coins of the Greek cities in the North, we need to explore the impact of the changes in the employed standards and the variety of denominations.

It is significant that heavy issues at the beginning of the coinage of the Greek cities in the North disappeared. For instance, the 8drachm, dominant in the coinage of Abdera (Period II, (May)), disappeared in Period III. This indicates that coins were used in local markets and probably became the means for everyday transactions. It was a common practice for the Northern Greek cities to strike heavy coins on one standard and fractional currency on another. This practice is met in the cities on Thracian coasts as Abdera and Maroneia although Abdera in Period VII (May) used the same

system for both kinds of coins. This practice relied on the position of the cities among different peoples and their need to keep a balance with the indigenous inhabitants and the Greeks as well in order to maintain their political independence. Thus they were engaged in commerce with the hinterland and the Greek cities and this perhaps demanded different types of economic behaviour. In addition, such a practice indicates the capacity of their mints in issuing coins on different standards.

The switch from one standard to another is an interesting element in the coinage of the Greek cities. The coinage of Abdera is a good example. The city (May, Period VI) struck on the Aeginetan standard but then (Period VII) changed to the Persian. At the same time Thasos adopted the Chian standard, Maroneia the Aeginetan and Ainos the Persian.<sup>222</sup> We have already argued that such practice was a response to commercial exigencies. We also noted the predominance of Abdera in the formulation of standards in the area (its influence on Macedonian coinage is evident) and the change in the use of standards because of political concerns.<sup>223</sup> So the Chalcidian cities during the expedition of Brasidas abandoned the Attic standard and went for the Thraco-Macedonian. We can thus maintain that the variety of standards employed by the Greek cities at different times is an indicator that Greek coinage was not only an economic phenomenon but a political one. Different standards employed at a specific time mean different economic and political interests.

Gold coins were issued by many of the Greek cities in the North. Ainos issued gold coins before 412 BC. The Olynthian League issued gold coins. It has been proposed

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<sup>222</sup> Various standards of measurement were also employed by the Greek cities. In an inscription from Thasos (*BCH* (1952) pp. 12-31) four different standards are met concerning the approved measurements for vessels: 8 metretai, 6 medimnoi, 9 Attic cubic feet, 12 Ionic cubic feet.

<sup>223</sup> May (Kraay and Jenkins (eds)), (1966).

that the Persian daric was the model for the gold issues of the Thracian cities.<sup>224</sup> Beside occasional gold issues as those of Abdera and Maroneia, the issuing of gold coins became regular in Thasos. That lies in opposition with the issue of gold coins by the cities in Greece proper which was merely a phenomenon of emergency. Probably the holding of gold mines by the Greek cities in the North and their relations with Persia explains the striking of gold issues, for gold enjoyed a wide use in the Persian Empire.

The Greek cities in the North were members of the Athenian League. They were subjected to tribute payment to Athens.<sup>225</sup> A temporary cessation in their coinage some time in the fifth century has often been associated with the Coinage Decree (ML 45) imposed by the Athenians to the allied cities. In the second chapter we argued that the Coinage Decree as such did not affect the coinage of the cities of the Athenian League but other factors were responsible for the cessation of their civic coinage. However, we can ask how the Athenian *arche* affected the coinage of the Greek cities in the North.<sup>226</sup>

The expansion of the Athenian *arche* harmed seriously the economic position of Thasos in the North (Thuc. I 101.3).<sup>227</sup> Thasos ceased its minting between the years 463 and 435 BC. But after 435 BC its coinage was prolific.<sup>228</sup> The Greek cities in the North had prolific coinage during the classical period down to the conquest of Philip

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<sup>224</sup> West (1929).

<sup>225</sup> The Thraceward region contributed a large share to the Athenian tribute, e.g. in 446 BC the amount of 120 T out of a total of 417 was paid by this district. See Edson (1947) pp. 88-105.

<sup>226</sup> See Wartenberg (1995) pp. 24-27.

<sup>227</sup> For the economy of Thasos and Athenian imperialism (ca. 450-411 BC) see Pouilloux (1954).

<sup>228</sup> See Le Rider (1967) pp. 185-191.

of Macedon. The Hoard evidence supports this assumption.<sup>229</sup> Moreover, the cities of the Chalcidic peninsula advanced a monetary alliance resulting in the fine coins of the 'Chalcidian League' with the head of Apollo on the obverse and the lyre with the legend XAAKIΔEΩN on the reverse. Also, stable obverse and reverse types were developed on the coins of the Greek cities in the North indicating their credibility in the market and their widespread circulation as recognisable issues. For example, the obverse on Acanthus' coins is occupied by the image of a lion attacking a bull.<sup>230</sup> An amphora is the face type on the bulk of the coinage of Terone.<sup>231</sup> 'Dionysus riding on a donkey holding a kantharos and a grape' is the major obverse type on Mende's coins associated with the wine production in the region. The head of Heracles with the lionskin forms the obverse type of the coins of Dicaea in Thrace and the head of a Nymph is the obverse type of the coins of Dicaea in Macedonia.<sup>232</sup>

What should we conclude in respect of the coinage of the Greek cities in the North and the Athenian *arche*? The Athenian presence was continuous in the North. Also, Athens was interested in the riches of the Northern region from a very early period. However, despite the economic and political interference of Athens in the North, the Greek cities there issued their civic coinage until their annexation to the Macedonian rule.

The Greek armies fighting their battles in the North and intervening in the political affairs there influenced economic activities and, moreover, coinage. The needs of an

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<sup>229</sup> Coins of the Greek cities in the North are well represented in hoards in Northern Greece, in Bulgaria, in Egypt and in Iran.

<sup>230</sup> See Desneux (1949).

<sup>231</sup> The amphora was the major type for the staters and the oinochoe for the fractions. See Hardwick (1998) pp. 119-134.

<sup>232</sup> See Schönert-Geiss (1975).

army made the local market flourish. The money of mercenaries gave impetus to new economic activities. Additionally, new patterns in coinage were employed out of necessity. From this point of view Timotheus' bronze currency at a time when Athens had no official bronze coinage of her own is a striking example (Ar. *Oik.* 1350a 23). Timotheus' bronze coins seem to follow the Macedonian pattern of bronze coins.<sup>233</sup>

## 5. Persian Coinage

We begin with the evidence of the hoards. In Greece the Athens hoard (*IGCH* 32, burial fifth century) consists only of darics. In the Elis hoard (*IGCH* 43, burial *ca.* 400) Persian darics are found with electrum staters of Cyzicus.<sup>234</sup> The hoard from Eretria (*IGCH* 63, burial *ca.* 350-40) consists of darics along with staters of Philip. From the evidence of the hoards in Greece, we can conclude that only darics, that is, gold issues and not *sigloi*, that is, silver issues circulated in an area, dominated by silver coinage. The hoarding of darics together with Macedonian gold staters shows the high status of the darics at the time, when the first gold issue of the Macedonians circulated. Elis was an appropriate place for hoarding darics, because the Olympic Games invited the circulation of many currencies, which might have been exchanged for the local currency. However, the picture of the circulation of Persian coinage in Greece proper is very different from what we may expect, according to the historians' account of the influx of Persian money in Greece.

Persian coinage prevails in many hoards in Asia Minor, since the area was under Persian rule for most of the fifth and fourth centuries. In hoards in Asia Minor the

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<sup>233</sup> Robinson and Price (1967) pp. 1-6.

<sup>234</sup> The coins in the hoard were probably for payments of mercenaries, since darics and cyziceans were established as the coinage for payment of mercenaries'. See Nicolet-Pierre pp. 200-208.

percentage of the sigloi is distinctively higher than that of the darics. Fifteen from the nineteen hoards with Persian coins (included in the *IGCH*) consist of sigloi. Why did the silver coinage of the Persians dominate Asia Minor? What was the role of sigloi in the Western satrapies of the Persian Empire? The above questions are considered later in this chapter.

Persian coins are found in hoards in Egypt (*IGCH* 1644, 1654 and 1656) but their representation is low. But early coins of Lydia and coins from provinces of the Persian Empire are found in hoards in Egypt. Does this indicate that Persian coinage did not extensively circulate in Egypt? To a degree, yes. For Egypt revolted from Persia several times (Ctesias *FGrH* 688 Fr 14.36, Thuc. I 104, 109-10, Diod. 11. 71.3-6) and for a long period of time was outside Persian control (404-343 BC). Also, in Egypt the currencies of Greek cities extensively circulated, especially Athenian 'owls' and thus their imitation by mints in Egypt during the fourth century.

The Avola hoards in Sicily (*IGCH* 2122, 2124, burial *ca.* 370, 360 BC) contain darics with other gold coins and a large number of Syracusan issues. The very few Persian coins hoarded in the West indicate that they were possessions of individuals and not the product of commercial activities between the Persian Empire and the cities in the West. More specifically, the presence of darics in Sicily might have been connected with military activities taking place in the East and in Sicily from the end of the fifth century to the first decades of the fourth century. Xenophon in his introductory lines on Cyrus' march against his brother (*Hell.* III 1) notes that Themistogenes the Syracusan wrote a detailed account of the episode (similarly, an *Anabasis*). Hermocrates on his way back to Sicily received enough money from Pharnabazus to



build five triremes and to hire a thousand mercenaries (Xen. *Hell.* I 1.31, Diod. VIII 63.2). It seems possible that people from the West joined the mercenary army of Cyrus. In Sicily the tyrant Dionysius I undertook a sequence of military activities. Most of the wars at that time were fought by mercenary armies (e.g. the Peloponnesians in Dionysius' army: Diod. XIV 58.1). Dionysius was also involved in Greek affairs (e.g. he assisted the Spartans to conclude the King's Peace in 387 BC). Such military activities led to circulation of many currencies in a wide area.<sup>235</sup>

The beginning of the Persian regal coinage has been extensively discussed. The argument relies on the date of the gold and silver coins (which probably succeeded a rare electrum coinage) with the lion and bull type, the so-called Croeseids. Ancient literature relates the Croeseids to the Lydian coinage during the reign of Croesus.<sup>236</sup> The Croeseid issues were minted at Sardes.<sup>237</sup> How is this coinage connected with the first regal Persian coinage?

The ancient tradition of Croesus' coinage has been challenged, since recent scholarship placed the issues of Croeseids in the period of the Persian rule of Sardes.<sup>238</sup> The argument has been mainly based on the evidence of hoards. The Cal Dag hoard (*IGCH* 1178, burial *ca.* 470 BC) contains 475 half-staters of lion/bull type together with 1,500 sigloi of the fist types with king half length, king shooting and

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<sup>235</sup> See Manganaro (1989) pp. 299-332.

<sup>236</sup> The Greek name 'Croeseids' for the lion/bull coins was applied to the coinage of Lydia and to the coinage which was minted in Sardes under the Persian rule. In the work of Greek writers, especially of Herodotus, a distinction between the achievements of the Persians and the Lydians was drawn in favour of the Lydians. The Lydians had an advanced civilisation and were in close cultural relations with the Greeks. Thus a deep understanding of the Lydian culture had been developed by the Greeks. From Herodotus' *History* it emerges that gold was used in different ways by the Lydians and by the Persians. The Lydians were the inventors of coinage and were engaged in commerce, whereas the Persians relied mostly on the process of gift-exchanging. See Lombardo (1989) pp. 198-212.

<sup>237</sup> See Carradice (1987) pp. 73-93.

<sup>238</sup> See Price (1984) pp. 211-222.

king carrying spear. The Bairakli hoard (*IGCH* 1166, burial *ca.* 500–490 BC) contains Lydian and Persian sigloi together. The two hoards of Persian sigloi published by Noe (*NNM* 136 (1956)) consist of Lydian staters and half-staters and of Persian sigloi. The evidence of the Persepolis Apadana deposits is also important. The coins found there are light Croeseids and silver coins of Cyprus, Aegina and Abdera. Surprisingly (?) there are no Persian issues of the Archer type. Thus from the coin finds in the Apadana the following questions arise: What was the position of the ‘Croeseids’ in the empire at the time of Darius I to whom a vigorous reorganization of the empire was attributed? When was the regal coinage of the archer type introduced?

The argument depends partly on the date of the Persepolis foundation. A widely accepted date for the Persepolis foundation deposits is *ca.* 511 BC.<sup>239</sup> Lower dates, that is, *ca.* 499–495 BC have been suggested.<sup>240</sup> Despite the significance of the date of the Apadana deposits, other factors must be considered. The coins, deposited in the Apadana foundation, were rather the product of a very selective process than of a chance hoarding.

Let us accept the earlier date for the Apadana deposits. At that time many Greek cities had already commenced their coinage. However, the circulation of most of them was not wide in the archaic period. Thus in the archaic hoards only coinages with wide circulation are found. For instance, the coinage of Aegina circulated widely in the archaic era and thus is found in the Persepolis deposits. The Greek cities in the North, the Thracians and the Macedonians had developed a network of commercial and political relations with the Persian Empire from a very early time. Thus coins of

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<sup>239</sup> Price, Waggoner (1975).

<sup>240</sup> Calmeyer (1989) pp. 51–59. Root (1989) p. 36 placed the Apadana foundation after 500 BC on the basis of the Fortification Tablet 1495 dated to 500 BC, where the Archer had been used as a seal.

Abdera, which are found in the Apadana, reflect the Persian connections with the North. Cyprus was under the rule of the Persians and thus its coinage is represented in the Apadana deposits. In a later period the coinage of the cities in Cyprus influenced the coinage of some Persian satrapies, e.g. of Lycia. Probably the early coinage of Cyprus had some influence upon the coinage of the Persian Empire. In my view, the coin specimens at the Apadana do not represent all the currencies which circulated in the empire. The presence of some particular issues in the Apadana deposits reveal that they enjoyed high acceptability at the time of the beginning of coinage as a medium of international commercial exchange.<sup>241</sup>

The presence of the 'Croeseids' at the Apadana indicates that they were a currency in the Persian Empire. Moreover, they became a Persian issue for a period of time until their complete replacement by the regal Archer issues.<sup>242</sup> The 'Croeseids', which circulated in the Persian Empire and hoarded widely, were not the issues, which were minted at Sardes at the time of the Lydian rule. Undoubtedly, the lion/bull coin was a Lydian issue and, if we give credit to Herodotus, the Lydians were the inventors of coinage (of gold and silver or only of electrum, if Herodotus' gold and silver coinage is electrum).<sup>243</sup> Apart from Herodotus' statement about the Lydian coinage, the deposits in the Ephesian Artemision assert an early date for the beginning of electrum

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<sup>241</sup> It has been argued that the Greek coins in the Apadana deposits belong to cities, which were subject to the Great King (or faithful to him). See Vickers (1985) pp. 3-4, Galmeyer (1989) p. 55. However, we cannot dismiss the assumption that a symbolic pattern had been followed for the selection of particular objects in foundation deposits.

<sup>242</sup> Vickers (1985) maintains that all 'Croeseids' should be regarded as Persian coinage and thus they were symbols of Persian power. Contra Root (1988) pp. 1-13.

<sup>243</sup> It has been argued that the lion was the symbol of the Lydian kingdom and thus the lion type coins have been attributed to the Lydians. But in the archaic coinage of the Thracians and the Macedonians the image of lion was quite common. Representations of lions are also found in the pottery from the Oriental period of the Greek art.

coinage in Lydia.<sup>244</sup> It has been argued that the specimens of coins, deposited at the Ephesian foundation, reveal the process from dumps to real coins, since there are silver dumps, coins without types or devices, coins with types and coins of small denominations.<sup>245</sup> Among the 93 electrum coins found in the Artemision foundation, fourteen, deposited in the central Basis, with the lion type, form a homogenous series have been attributed to Lydia.

In the fourth chapter we argue about the attitude of the Persians towards the culture of their subject-peoples, emphasizing their ability to adopt practices of their subjects. Thus the advanced culture of the Lydians possibly influenced the culture of the empire. We can argue that part of the staters and half-staters with lion and bull were issued under the Persian rule. Numismatic evidence supports this view. There is a great similarity of fabric and technique between the lion/bull coins and the first Archer issues. The silver sigloi retained the weight of the earlier half-staters (5.5 gm). We can assume that there is no a considerable interval between the two emissions, the lighter ‘Croeseid’ and the sigloi of the first types.<sup>246</sup> Thus the ‘Croeseids’, minted at Sardes after the fall of Lydia (546 BC), represent an issue, which was used for monetary transactions in the empire before the Persian kings assume their imperial coinage. The development of the economy of the Persian Empire required a new regal coinage and thus the ‘Croeseids’ were put out of circulation at the time, when the Archer type coinage became substantial to meet the fiscal exigencies of the empire.

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<sup>244</sup> Some of the objects from the Basis are dated to the seventh century, some others to the early sixth century. See Jacobsthal (1951) pp. 85-93. A lower date *ca.* 600 BC for the Artemision deposits has been suggested. See Robinson (1951) pp. 156-167.

<sup>245</sup> Robinson (1951) pp. 156-167.

<sup>246</sup> The date *ca.* 513 BC has been proposed for the emission of the lighter ‘Croeseids’ and the date *ca.* 513-500 BC for the sigloi of the first two types and the date *ca.* 493 BC for the issue of the darics. Descat (1989) p. 29.

The Lydian staters in the Apadana therefore were a coinage minted by the Persian authorities and as a Persian issue was deposited at Apadana.

The absence of the Persian coins of the archer type from the Apadana foundation allows the conclusion that at the time of the Apadana burial the regal coinage of sigloi had not commenced and thus the beginning of this issue should be dated some time after the Apadana foundation.<sup>247</sup> However, we can say that Persian coinage was represented in the Apadana deposits by the 'Croeseids'. The principles behind the Apadana deposits are not clear. As we said above, the choice of these particular coins would be the outcome of their wide circulation in the newly founded empire and of the symbolic character that their types carried in regard to the imperial ideology at the time of the strengthening of the Persian rule. At the time of the Apadana burial the 'Croeseids' were the established currency of the Persians and thus they found their way into the foundations of the Apadana. The newly introduced regal coinage was under a process of establishing both its role in monetary transactions in the empire and its connotations of the imperialistic ideology of the Persian Empire.<sup>248</sup>

Even if we accept the higher date for the Apadana deposits, we can date the emission of the first sigloi with the king type (or simply with the archer type, if the identification of the image with the king is not conclusive)<sup>249</sup> around 513-500 BC. Moreover, numismatic evidence makes clear that 'old' and 'new' issues circulated concurrently for a period of time. Also, the use of the coin with the 'king' shooting

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<sup>247</sup> Robinson (1958) pp. 187-193.

<sup>248</sup> It has been argued that in foundation deposits only antiquated money is to be found because of a deliberately selection, for instance, the temple of Hera at Argos.

<sup>249</sup> The representation of the king on the Persian regal coinage has been questioned. See Root (1989) pp. 33-50, Calmeyer (1989) pp. 51-59. I think that the conservatism in the types of the Persian sigloi and darics reveal that they carried the picture of the Persian king in general, identified with Darius, Xerxes, Artaxerxes and so on, as a manifestation of the central power of the Persian Empire.

(Type II) as a stamp seal on the reverse of the Persepolis Fortification tablet 1495, where a date in year 22 of Darius the Great is given, that is, *ca.* 500 BC, indicates that the regal issue of Type II was in use at that time.<sup>250</sup> So if we accept the lower date for the Apadana foundation, that is, later than 500 BC, we can still maintain the higher date for the emission of the Persian sigloi of type I and II.

A further point requires attention. Was the introduction of the early Persian coinage related to the reforms, attributed to Darius I? According to Herodotus, Darius was the *kapelos* king (III 89). This implies that during his reign a process of monetization took place in the empire. The tributary system introduced by Darius relied, to a great degree, to monetary tribute of the Persian subjects. Such a process made the need for a regal issue inevitable. The function of the regal coinage is related rather to the process of the accumulation and use of tributary resources by the king than to the process of the payment of tribute by the subject peoples. At the time of Darius the majority of the Ionian cities in the western district of the empire had assumed a prolific coinage. In the eastern provinces there were other patterns of economic development. However, even in provinces, where independent mints were absent, a variety of currencies were in circulation from the early archaic period as emerges from the archaic hoards in the East. Moreover, many provinces in the empire assumed their independent coinage in an early time (we come to this later). Thus Persian sigloi or darics were not necessary for tribute payment. But it was possible the tribute money, accumulated in the king's treasury, to be used for issuing regal coins in order for the king (or the central imperial government) to manage financial issues.

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<sup>250</sup> Root (1988) pp. 1-12, id (1989) p. 34

I do not find any convincing reason to separate the beginning of the Achaemenid coinage from the reforms initiated by Darius. The Persepolis Fortification Tablets give evidence that for the period 510-494 BC certain payments were made 'en nature', while after 492 BC were made in coined money (*PTT*). Darius' reforms intended to improve the administration of the empire through a unified pattern, which allowed the unity of the empire (as the later history of the empire proves) under the Achaemenid rule. Hence an issue minted under the central Persian authority would have assisted in the improvement of the administration of the empire and the better exploitation of its financial resources. Moreover, during the sixth and fifth centuries the organisation of the empire was, to a great degree, centralised. In the fourth century many satraps revolted from the king or achieved a degree of independence. Thus they financed their military and political undertakings by their own resources, using coinage minted in their names. Therefore we can argue that the regal Persian coinage commenced in close relation to Darius' reforms, since his centralised political projects required an imperial coinage to finance military campaigns and to unify the economy of the Empire on the basis of the tributary system.<sup>251</sup>

The regal coinage of Persia began some time by the end of the sixth century and continued until the time of Alexander's conquest of the empire.<sup>252</sup> In circulation 20 silver sigloi equalled in value one daric (ratio 13.3:1, probably during Darius' reforms the ratio was 13:1). Fractions of the daric are very rare (only the twelfths disposed in

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<sup>251</sup> Ariadnes' silver coinage, reported by Herodotus (VI 166.2), requires a place in Darius' coinage. There is no evidence of such silver issue, minted by Ariadnes. Some coins which had been initially attributed to Ariadnes' issue had been attributed to other minting authorities after extensive study (e.g. a coin with a legend read as ARUA seems to be a Sidonian issue). It is not possible that such advance coinage had been minted in Egypt, since Egypt had no previous tradition in coinage. Only in the fourth century coins were minted in Egypt (imitations of Athenian 'owls'). There is no obvious reason to believe that Ariadnes was in need to issue silver coins. In Egypt, at that early time, many Greek currencies were in circulation. Herodotus' reference to the pure silver of Ariadnes was about silver bullion, not coinage. Contra Tuplin (1989) pp. 61-83.

<sup>252</sup> See Carradice (1987) pp. 73-93.

Berlin and London). In the Achaemenid Empire two currency systems were employed, that is, a silver standard which dominated the territories south and east of Taurus and a gold, which dominated the eastern provinces.<sup>253</sup> The sigloi circulated widely in the western provinces because of the silver coinage of the Greek cities in Ionia. The predominance of silver in the coinage of all the minting Greek cities required the circulation of the silver sigloi in areas, where the role of the Greeks as traders or soldiers, was important. The Persian standards influenced the standards of the cities, which were in political or economical interaction with the Persians. For this reason, it has been argued that some 'peculiar' Athenian weights of gold objects might be explained as having been made on the standard of a daric. In the inventories of the Parthenon there are some round figures, which could be converted into sigloi and darics.<sup>254</sup>

In the hoards found in Greece and Macedonia buried in the fifth and fourth century only darics are found. However, in hoards from Asia Minor dated to the fourth century the preponderance of sigloi is considerable. In hoards in Egypt, dated to the end of the classical period, only darics are present (only in the earlier hoard of the Asyut sigloi are found). Thus darics were used in transactions outside the empire and, more specifically, in relation to the Greeks. In this way, the circulation of darics in Greece became the basis for the image of the golden Persia, derived from Greek poets and historians. The sigloi enjoyed great circulation in the western provinces. Finally, the daric became the main regal issue in the last period of the empire and hence the silver emissions were reduced. This can be explained because many Greek cities minted gold issues in the fourth century. Also, the autonomous coinage assumed by

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<sup>253</sup> Bivar in *CHI II* pp. 610-639.

<sup>254</sup> Lewis (1986) p. 77, Vickers (1989) pp. 249-257, id (1996) pp. 171-174. He argues that large tribute payments were made in Persian coins in the late 430s and early 420s.



mints in many provinces and the autonomous coinage of certain satraps produced enough silver coinage, which replaced the regal sigloi. Moreover, the gold issue of Philip of Macedon allowed extensive circulation of darics, since the gold issues of the Macedonians spread to a wide fiscal area of Persian interests. It was the 'Philippeioi', which overtook the wide acceptability of the darics in the West and in the East.

What was the origin of the regal coinage in the Persian Empire? In other words, to what extent did the structure of the Persian Empire make the issue and the use of coined money its integral part? The process of gift-giving was central in the structure of the empire (see chapter four). However, although gift-giving determined part of the administrative and economic sectors in the empire, individuals possessed liquid money. According to Herodotus, some imperial payments were made in the form of money, for instance, tribute payments. The royal treasuries consisted of bullion and of currencies, which both were the sources for the regal coinage. The western provinces of the empire, namely the Greek cities in Ionia, assumed coinage in an early period and coined money was the established medium for the cities to meet their public expenses. The province of Lydia, which had an important role in the empire, provided the pattern of coins as a means for commercial activities. From an early period some of the provinces originated a substantial coinage, an undertaking which reveals, to some degree, a monetary local economy, either as the consequence of the tributary system or as the product of internal developments.

The coinage of Lycia is an example. Coinage in Lycia commenced shortly before 500 BC. The Group A of the issues of Lycia was struck on a standard not found elsewhere and was characterised by uniformity. The main denomination was the stater

supplemented by fractions. The subsequent Groups B, C, D were struck on different standards and they carried various obverse and reverse types. The Attic standard was used in the western country (stater of 8.4 gm) while the heavy standard was used in the central and eastern country (stater of 9.7 gm). Many hoards are found in the territory of Lycia, which contain Lycian coins together with other currencies. In the Decadrachm hoard, which contains a great variety of coins, 970 coins come from the mints of Lycia out of 2,000 coins in total. In hoards outside Lycia the coinage of this satrapy is not represented.<sup>255</sup> The weight standards, the denominations, the types and the area of circulation of the coinage of Lycia show that financial exigencies within the province together with a certain evolution in the local economy inaugurated Lycian coinage at mints under the authority of the Lycian dynasts.<sup>256</sup> Lycia lies geographically in a neighbouring area with the Greek cities in Ionia and probably its first issue was born out of the Greek pattern of coinage. The Lycian coinage continued throughout the two centuries of the Persian Empire. Therefore epichoric developments and the monetization of the periphery affected the economic policies of the empire, employed by the central government.<sup>257</sup>

These parameters made the Persian authorities mint regal coinage. Moreover, the economic power of the Persian Empire and the purity of its coinage made the Persian

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<sup>255</sup> It is absent in hoards from Greece. In fact, no coinage, issued in the satrapies of the Persian Empire, is represented in hoards from Greece proper, because probably the coinage of the Persian provinces was a medium for internal transactions.

<sup>256</sup> See Zahle (1989) pp. 169-182.

<sup>257</sup> Similarly, the coinage of Cilicia was prolific during the Persian period. Coinage in Cilicia commenced *ca.* 430 BC. It was struck on the Cypriot standard (one stater equivalent to two sigloi) because the coinage of the Cypriot cities had wide circulation in the area (hoards found in Cilicia contain Cypriot coins. See Lemaire (1989) pp. 141-156). The foreign currencies, which circulated in the area earlier, and the Persian sigloi were replaced by the local coinage. Only Athenian tetradrachms circulated in the area (3 Cypriot staters were equivalent to two Athenian tetradrachms). The Cilician coinage shows that at the time, when the local market demanded coined money, coinage was assumed independently from regal Persian coinage but was competent with the Persian standards. See Davesne (1989) pp. 157-168. The first issues of Judah and Samaria were issued in the fourth century. See Machinist (1994) pp. 365-379.

darics and sigloi enjoy international acceptability. However, the demand for coined money in the empire does not weaken the process of gift-giving from its symbolic character and its importance to the required balance between the central authority under the king and the peripheral authorities, operating by satraps and many other officials. Finally, the political and economic interests of the Greeks in the empire stimulated the minting and the circulation of the Persian money.

## **6. The role of Persian coinage in the Greek world**

The histories of Herodotus, Thucydides and Xenophon presented Greeks and Persians in a process of interaction and of mutual dependence in the pursuit of their political objectives. In the *Histories* we see how the Persians gradually interfered in Greek politics and how they imposed their interests on the Greek *poleis* from the end of the fifth century onwards (for instance, the sequence of the so-called King Peace).<sup>258</sup> Furthermore, interaction and dependence between Greeks and Persians were found in the field of politics, warfare and economy. Thus we can ask whether diplomacy employed by the Persian Empire towards the Greeks affected the function of the regal coinage.

We said that only darics found their way into hoards in Greece. Thus Persian gold (well-known for its purity) was intended for hoarding in Greece proper.<sup>259</sup> If we accept only this, we will dismiss *a priori* the economic 'behaviour' of the Persian coinage in Greece. However, large amounts of Persian money were used for military

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<sup>258</sup> It is interesting how the picture of barbarian Persians, the *par excellence* enemies of the Greeks, which emerges from Herodotus' history, was transformed in Xenophon's account of the last years of the Peloponnesian War.

<sup>259</sup> Darics were 97%, 98% or 99% pure. See Melville-Jones (1979) p. 33.

payments. In the inscription of the Spartan war-fund of 427 BC (ML 67) we find darics as contributions to the war-funds (l. 2). The role of Persian money was important in the last stage of the Peloponnesian War, for instance, the money given to Lysander (Xen. *Hell.* I 5-6, Diod. XIII 70.3, Plut. *Lys.* 4). The monthly payment of the mercenaries of Cyrus is given in darics (Xen. *Anabasis* VII 2.3). The Athenian admiral Conon built a fleet with 500 Talents of silver given to him by Pharnabazus (Diod. XIV 39.1). Most of the cities involved in the war benefited from Persian money. The Corinthians in 393 BC manned ships with the money handed to them by Pharnabazus and thus established control on the sea in the Gulf of Achaia (Xen. *Hell.* IV 8.10). The above examples among many others support the role and the economic 'behaviour' of the darics (and, to some degree, of silver issues) in Greek warfare. Persian money was not intended for hoarding but was used in lieu for the expenses of the war. The bulk of evidence for payments to Greeks in darics comes from the end of the fifth to the fourth century. This indicates that money played an important role in Greek warfare and, for this reason, Persian money, regal and satrapal, found its way beyond the boundaries of the Empire. Thus a higher degree of monetization took place in both the Greek *poleis* and the Persian Empire at the eve of the fourth century. In the examples given above, there is no evidence of Persian donations to Greek cities or to individuals in the form of gift-giving.

Darics existed in the treasuries of the Greek temples. The treasurers of the sanctuaries invested the money of the gods in a variety of financial activities. This means that the accumulation of darics at the temples was intended for fiscal undertakings and not for mere hoarding. The accounts of Delphi provide evidence. At the temple of Apollo at Delphi darics were accumulated. However, darics were used for commercial

exchanges. For instance, the naopoioi in 335 BC spent an amount of darics (along with 'Philippeioi') on buying cypress from Sicyon and Corinth (*FD* III 5, 9 col. I, 36, 50 col. II ll. 9-13).<sup>260</sup>

Did Greek individuals possess Persian money? A passage from Lysias (*Against Erat.* 11) provides evidence. At the time of the Thirty (404 BC), Lysias' chest consisted of three talents of silver, 400 Cyzicenes, 100 darics and four silver *phialai*. According to this passage, darics were part of the *aphanes ousia* of some Athenians. Such assets in liquid money were used in economic activities assumed by rich Athenians. Since in Athens the well-to-do citizens performed liturgies, it seems plausible to say that darics, owned by them, were possibly used in financing liturgies (e.g. costly trierarchies). We can therefore conclude that darics functioned as liquid money in the Greek cities and intended to meet immediate fiscal exigencies.

To sum up. Persian coined money functioned in the frame of the political relations between the Persians and the Greeks. Persian money was used to finance the wars between Greeks and to serve the ambitions of powerful Greek *poleis* for supremacy in the Greek world. Its 'behaviour' in Greek cities was economic, since Persian money was spent on military payments and on building fleets. The influx of Persian money in Greek *poleis* created a network of exchanges, which resulted in a multilevel function for Persian coinage in Greece. Thus Persian coinage found its way into the treasuries of Greek temples (and thus became financial resources of certain *poleis*) and into

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<sup>260</sup> See Bousquet (1985) pp. 221-253. Darics were in use in Delphi until a late period, when the gold 'Philippeioi' were in a wide circulation and use. For instance, the accounts of the crown of the Queen (Olympias), 327/6 BC contain amounts of money in darics (*FD* III 5, 58). The accounts of Theon, 324 BC also contain sums in darics. For a period of time darics and 'Philippeioi' might have enjoyed the same degree of acceptability in various commercial transactions. In an inscription the gold Macedonian issues were called 'Dareikoi Philippeioi' (*IG* II 2 1526 ll. 22-3)

private treasuries. In this way, it was used as liquid money to serve financial ends and thus operated a monetary economy.

Our sources emphasise the circulation of darics among the Greeks. Does it mean that regal silver sigloi did not circulate in the Greek cities? The general assumption is that gold issues were used for overseas transactions while silver and fractions were used for internal transactions. Thus darics dominated the exchanges between the Greeks and the Persians. Moreover, financing Greek wars with Persian money required large amounts of money, which were paid in large issues of darics. Sigloi were probably in circulation in the Greek cities for minor transactions but they are absent from the bulk of epigraphical and literary testimonia because the high value of the gold daric among the silver-minting Greek cities demanded a particular mention (e.g. in an inscription dated to 405/4 BC (*IG I<sup>3</sup> 342*) ten Median sigloi are recorded among other offerings). In the fourth century, as we said above, the emission of gold issues might have been more prolific than the emission of silver issues, since Persian sovereignty over the Greek cities in Asia Minor had been secured after the King's Peace. The political interference of the Persians in Greek affairs had expanded. Finally, at that time many satraps had assumed their own minting. In conclusion, the economic 'behaviour' of Persian money in the Greek world gave a considerable reason for coinage and for its function within the empire, although the practice of gift-giving was prevailing in the edifice of the Persian *arche*.<sup>261</sup>

So far we have dealt with Persian coinage as an economic medium operating political, military and economic ends in the Greek world. Now we shall ask whether the entire

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<sup>261</sup> See Lewis (1989) pp. 227-235, Baslez (1989) pp. 237-277.

procedure of financing many of the Greek affairs from the late fifth and during the fourth century was a central Persian policy. In other words, to what extent part of the darics, minted at the royal mint(s), was intended for expenditure required because of the Persian policy towards the Greek cities.

Sources show that certain satraps bestowed money on Greek leaders. Moreover, the expenses of the satraps either to maintain a Greek mercenary army or to finance the Greek wars were met by the financial resources of their satrapies. For example, Cyrus asserted to Lysander that he would use his own financial resources (*idia*), even his gold and silver throne, in order to finance the war between the Greeks (Xen *Hell.* I 5.3). Thus the influx of Persian money into Greek military affairs was not an economic policy employed by the Great King. But sometimes money given to Greeks came directly from the royal treasury. For instance, the Great king provided Conon with money (Diod. XIV 81.5-6). However, payments from the royal treasury were not regular and, according to the author of the *Hellenica Oxyrhynchia* (XIX 2), bad payment 'is always the case for those who fight on the King's half'. Thus expenses for Greek affairs were not part of a centrally organised economic policy. The increased independence of satraps in the fourth century originated a monetary economy within the satrapies and employment of particular economic policies.<sup>262</sup> Probably the monetization of Persian economy was rather a matter of the periphery than of the central sovereignty. For this reason, Persian money and, mainly darics found their economic function in the Greek world.

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<sup>262</sup> The increase of the output of certain satrapal mints has been connected with their involvement in revolt. Thus they faced with increased demands of money to finance war and to pay mercenaries. For this purpose, the coinage of Datames and Pharnabazus in Cilicia, of Tachos in Egypt, of Strato in Sidon, of Orontes in Mysia was minted. However, the satrapal coinage in the period of revolt was not merely the outcome of the exigencies of the revolt. We have already argued that in many satrapies the coinage was prolific from an early period. Also, in many satrapies as in the Hellespontine Phrygia coinage was operated by the civic mints of the Greek *poleis* there. See Moysey (1989) pp. 107-139.

We saw how Persian coinage functioned in the economic and political network that the relations between the Persian Empire and the Greek *poleis* created in the fifth and fourth century. Furthermore, what was the 'behaviour' of the coinage of Greek cities in the Achaemenid Empire? First, on hoard evidence the penetration of Greek money in the Empire seems significant. More specifically, the Athenian owls prevailed in a great number of hoards, found in areas, which were under Persian rule in the fifth and fourth century BC, e.g. in the 'Decadrachm Hoard' and in the Asyut hoard in Egypt where 127 Athenian tetradrachms are found but only 10 sigloi). We said earlier that Athenian owls were the dominant currency in circulation in Egypt in the Achaemenid period until the time of King Artaxerxes III (358-337 BC).

Second, the independent coinage of many satraps was formed on the pattern of the coinage of the Greek cities. Some of the issues of satrapal mints carried legends in Greek. For instance, a silver tetradrachm (dated *ca.* 420 BC or later in 412/11) carries the head of a Persian satrap in tiara (obverse) and owl with olive sprig and crescent and the legend ΒΑΣ which stands for the king of Persia (reverse) (BM 1947.7.6.4).<sup>263</sup> The satrapal double sigloi minted in Tarsus employed the die of Cimon which shows Arethusa with head facing as obverse type. On the obverse of a double-siglos issue, minted in the satrapal mint of Mallus, Heracles with the Nemean lion was depicted while on the reverse the royal Archer, the principal type of the regal coinage, was represented. The silver staters of Pharnabazus issued in the civic mint of Cyzicus carried the city's badge, that is, the tunny-fish with portrait of the satrap (obv) and prow of a warship (rev). Coinage, minted under the Persian satraps either in the satrapal mints or in the civic mints of the Greek cities under their rule, employed

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<sup>263</sup> The coin has been attributed to Tissaphernes. It was probably issued for the payment of Spartan mercenaries in Miletus. See Cahn (1989) p. 99.



several coin-types related to civic Greek coinage. Thus Greek mythology and religion was represented on the satrapal coinage revealing the strong influence of the Greek civilization on the peoples of the Persian Empire, either barbarous or hellenised.

Third, the standards of Greek cities were employed for certain satrapal issues. This indicates that issues struck on the standards of Greek coinage were intended to be compatible with Greek civic currencies, circulating at the same time in the area, and to meet expenditure (commercial or military) in connection with the Greeks. Therefore the coinage of certain Greek *poleis* and, especially of Athens, was in circulation in the vast empire throughout the Achaemenid period. It was the medium for financial transactions (commercial transactions or military payments). Also, the high acceptability of Greek currencies in the Empire made Greek coins desirable for hoarding. Moreover, Greek coinage had functioned as the cultural pattern on which the governors of the Persian provinces minted their coinage. The types, which many of the satrapal issues carried, reveal the fusion of Greek civic ideology and of Persian imperial ideology.<sup>264</sup> In fact the ‘behaviour’ of Persian coinage in the Greek world and the ‘behaviour’ of Greek coinage in the Empire reveal the interaction of Greeks and Persians throughout the classical period, despite the reluctance of Greek historians to describe the two worlds in their political and economic interaction.

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<sup>264</sup> For instance, the employment of portrait as coin-types for satrapal coinage was related to the Persian ideology (see the representation of Darius at Persepolis). Portraits of individuals are not found in civic Greek coinage in the classical period. An early example of portrait on coins, is on issues attributed to Themistocles as the governor of Magnesia (Thuc. I 138.5). The two didrachms attributed to Themistocles carry the image of Apollo as obverse with the legend ΘΕΜΙΣΤΟΚ-ΛΕΟΣ and a bird of prey with the letters M.A. The bearded head in Attic helmet on a fractional coin (Attic hemiobol) has been regarded as representation of Themistocles himself. See Cahn, Gerin (1988) pp. 12-20.

## 7. Conclusions

(I) On the evidence of coinage, tribes, kingdoms and Greek cities in the North were in economic interaction with the *poleis* in Greece proper. Thus economic practices, developed by the different peoples in the region, are bound up with the Greek *poleis* and their economics.

(II) The coinage of the tribes and the Macedonian kings was struck in electrum, gold, silver and bronze. Macedonian coinage was minted in a variety of denominations including very large issues, which might possibly have been used as bullion, and very small issues. A variety of standards were employed for Macedonian coinage at different times. Legends and lettering on the coins of the Macedonians were on the pattern of those of the Greek cities. The Greek cities in the North often offered the coin pattern or their technological expertise to these peoples for the minting of their coinage.

(III) Macedonian coinage indicates the political independence of these peoples on the fringes of Hellenism. But its 'behaviour' was mainly economic. It served the tribes and the kingdoms to meet economic needs. By the means of coinage, the people in the North carried out large exchanges, directed by trade, building programmes or by maintenance of armies, and, at the same time, petty transactions within local communities. Thus Macedonian coinage functions in the same pattern of the *polis* coinage.

(IV) The study of the coinage of Macedonia and of the Greek cities and the economic practices which implies assists in a better understanding of the Greek economy in a wide spectrum, which goes beyond the *polis* economy and includes the economy of peoples whose political organisation was not of the *polis* but they were part of Greek civilisation. Furthermore, it makes clear that coinage and economic practices employed in the Greek world served a rational system which worked independently from other institutions, because, in fact, the Greeks had 'a concept of economics'.

(V) The regal coinage of the Persian Empire was the central medium for monetary transactions, since the subject areas developed a level of monetization, which required coined money.

(VI) The Persian policy towards the Greeks from the latter part of the fifth century to the fourth century, was mainly accomplished by the means of regal coinage, the darics. Thus the regal coinage was the outcome of political, military and economic interaction between the central Persian authority and the periphery and between the Persians and the Greeks.

(VII) In the Achaemenid period the coinage, which was assumed in the provinces of the empire independently from the regal coinage but, it was compatible to that, either in standards or types and legends, played a significant role in the economy of the empire and for its political sustenance. In the fourth century BC the majority of the Persian provinces reached a substantial level of monetary economy and hence assumed their coinage.

(VIII) The coinage of the Persian Empire reflects the political structure of the empire as the rule of a central government over political communities, which sustain, to a great degree, their political, cultural and economic integrity, and they followed a different pattern of development. It also reflects the economic ramifications derived from this particular model of the organisation of the Achaemenid Empire.

(IX) The study of Macedonian and Persian coinage in relation to the *polis* economy assists in understanding the ramifications of the *polis* economy and its complexity and the economic role of coinage in the Greek *poleis*. However, the *polis* historians ‘embedded’ in their understanding of the *polis* economy and of the *polis* coinage certain ideologies which resulted in contradiction between reality and perception of reality. In the following chapters we will see how the historians consider economics in their *Histories*. For instance, we will see whether Persian wealth and money functioned in their economic ends in the context of the *Histories*. Also, whether the economic practices of the Greeks operated a rational system of economy. Moreover, whether Greek coinage has an economic role in the political structure of the *polis*, according to the historians.

## **PART TWO**

### ***The economics of the Greek polis in Greek Historiography***

## **CHAPTER FOUR**

### ***Herodotus (Bks VII, VIII, IX) on the economics of the Persian Wars***

#### **1. Introduction**

In this chapter I will explore Herodotus' understanding of the economic factors, which played a role in the course of the Persian Wars. In dealing with Herodotus' perception of economics, we must ask whether Herodotus' elaboration of economic factors and his perception of wealth were the product of the philosophical view of wealth established in the archaic and early classical period by the lyric poets and by fifth century tragic poets; or whether they were influenced by the economic practices employed by the Greek cities in his era and, especially by Athens in relation to its naval empire. Hence did developments in political and social institutions, in the economy, in the warfare tactics of the Greek city-states from the Persian Wars to Herodotus' time become a theme of Herodotus' history? To what extent did the economy of the Persian Empire affect the historian's view of economics?

Dealing with Herodotus' view of the economics of the Persian Wars, we shall consider the economic issues which are raised by the historian in the books VII, VIII

The Persian Empire was built up by the numerous Persian conquests (e.g. Media, Lydia and Babylon) and the riches brought to the Persian kings from the conquered regions.<sup>265</sup> What was the motive behind the planned Persian conquest of Greece? Let us consider the Persian argument for and against the military enterprise against Greece (VII 5-14). Mardonios says that Europe is a beautiful and a fertile land and therefore it is worthwhile to become a possession of the King (VII 5).<sup>266</sup> Xerxes himself thinks of the profits (*agatha*) which he will enjoy after the conquest of Europe (VII 8). Mardonios again speaks of the small military forces of the Greeks and of their poor financial resources (VII 9), that is, the factors making the Persian conquest successful because of the prosperous Persian finances.<sup>267</sup> These elements in the Persian argument give an account of the economic motives, which determine the objectives of a war, and of the role of wealth in financing a successful military enterprise. Later in the narrative we hear from Herodotus that the Persians were competing for money (*χρήματα*) while the Greeks were competing for virtue (*ἀρετή*) (VIII 26).<sup>268</sup>

However, Herodotus' account of the motivation for Xerxes' invasion of Greece includes other elements, that is, the concept of the Persian revenge on the Athenians (VII 9), the tragic concept of divine jealousy (*φθόνος*) for those who are great (VII

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<sup>265</sup> For example, Cyrus, king of Anshan, took silver, gold, goods, property as booty from Ecbatana (Nabonidus Chronicle Col. II, ll. 3, 4, 18, Grayson (1975)). Also, Thuc. I 16, 17 in respect of the growth of Persian sea-power.

<sup>266</sup> In contrast, Demaratus (VII 107) underlines that it is Poverty (*Penia*) which dominates Greece. For this reason the Greeks developed wisdom and law to maintain political order.

<sup>267</sup> In Aeschylus *Persae* ll. 235, 237 the Queen raises the theme of size (*plethos*) as the only important factor for military success, according to Persian conceptions. She also stresses that wealth is an important factor making for military success. However, Artabanos in his speech to Xerxes treats large numbers as potentially disadvantageous (Hdt VII 48.1). Artabanos, as a tragic advisor, warns Xerxes that there are no harbours for such an enormous army and thus the very superiority of the Persian army will prove disastrous. For large numbers and '*pletheia*' elements see Hall (1996) pp. 24-25.

<sup>268</sup> See Konstan (1987) pp. 59-73.

10) and the king's dreams and their interpretation (VII 17, 19).<sup>269</sup> These irrational elements included in Herodotus' account of the reasons for the Persian invasion of Greece recall the cause (*αἰτία*), which made the Greeks and the barbarians fight against each other, found in the *Prooimion*. The historian offers mythological reasoning on the causes of the war, that is, a sequence of abductions of women, and, simultaneously, his scepticism on that (I 2-5).<sup>270</sup>

The Persian campaign against Greece required careful preparation. Works on a great scale might have been accomplished before the actual Persian invasion, that is, the construction of the canal on mount Athos (VII 23, 24), the bridge over the river Strymon (VII 25) and the bridge of the Hellespont (VII 33-36).<sup>271</sup> Public works and their expenses were well documented in Persia and in the Greek *poleis*. However, Herodotus' account of these works is a detailed description of the required task rather than a record of financial expenses. These works, despite their enormous scale, were temporary, undertaken by the Persian army. Thus Herodotus was not concerned with their financial implications.

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<sup>269</sup> Also, the Queen's dream in Aeschylus *Persae* l. 176. In the context of ancient literature the importance of dreams in decision-making by kings is considerable. In the *Iliad* (II.6) Agamemnon's dream is characterised as *ὄνειρος οὐλός* (destructive). See Oikonomides (2001) pp. 31-35. He argues for a different function of dreams in decision-making by Greek leaders and oriental kings.

<sup>270</sup> In ancient historians' causation of the wars mythological, religious, philosophical and historical aspects are fused. See Immerwahr (1956) pp. 241-280, Shipley (1993) pp. 1-24. For causes and motives for the Greco-Persian Wars see Hornblower (2001b) pp. 48-61.

<sup>271</sup> Similarly, during Darius' Scythian campaign the Samian engineer Mandrokles constructed a bridge for ships across the Bosphorus (IV 87-142). Darius completed the construction of the canal of the Red Sea, a project which had been begun under the Egyptian king Necho (Hdt II 158.1-2 and the stele from Red Sea Canal (Kent 1953)). 'The Achaemenids, with unlimited supplies of cheap labour at their disposal, were always partial to large-scale engineering schemes, both civil and military', Green (1996) p. 172

Herodotus (VII 61-99) describes the Persian army, the infantry, the cavalry and the naval forces, and the nations of which it consisted (and Aesch. *Pers.* ll. 21-58).<sup>272</sup> Sixty-one nations (*ethnea*) contributed forces to the Persian army against Greece.<sup>273</sup> Herodotus describes the armament of these people. This confirms his ethnographic interests. The historian drew attention to the ten thousand Persian soldiers called Immortals (VII 83, Diod. XI 7.4, Heracleides of Cyme *FGrH* 689 Fr 1) and to their armament with gold ornament (see Aeschylus (*Persae* l. 8): πολυχρύσου στρατιᾶς). Gold is an indicator of the wealth of the Persian aristocracy. Gold in this context has no economic function. The naval forces of the Persians are given in detail (VII 89-99). Traditionally maritime nations contributed ships and crew. For instance, the Phoenicians contributed one thousand two hundred and seven triremes. Later in his narrative (VII 184) Herodotus estimates the size of the Persian army as 2,641,610 men.<sup>274</sup> The detailed account of the Persian army, despite any wrong calculations and exaggerated numbers, is, in my view, a good example of the historian's approach to the Greco-Persian conflict in its military aspect.<sup>275</sup>

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<sup>272</sup> The whole passage has been discussed in the tradition of the *katalogoi* (lists of ships) from Homer onwards (*Iliad* 2.494-759, 816-877). For Herodotus' *Historiae* as a formulaic composition see Griffiths (2001) pp. 75-89.

<sup>273</sup> There is no consistency between Herodotus' list of the peoples of the empire and the lists in the Achaemenid inscriptions. See Armayor (1978) pp. 1-9, Calmeyer *Achaem. Hist. II* pp. 11-26. This inconsistency can be explained by Greek orientation of Herodotus' sources. However, it seems likely that 'the royal inscriptions were not administrative documents but 'propagandist' proclamations of the royal power'. Burn (1984) ch. VII reached the conclusion that the Persian military organisation was not identical with the administrative, though, since both were based on natural, ethnic divisions, they bore considerable resemblance. The royal inscriptions might have reflected oral epic conventions. See Balcer in *Achaem. Hist. VIII* pp. 257-264.

<sup>274</sup> Different numbers for the Persian army are offered by Diodorus (XI 3.7). In Aeschylus *Persae* (ll. 341-2) the Persian naval power consists of one thousand Persian ships, two hundred and seven were swift triremes. Ctesias (*FGrH* 688) gives the number of one thousand Persian ships in the battle of Salamis.

<sup>275</sup> For calculation in Herodotus see Keyser (1986) pp. 230-242. It is noticeable that he prefers 'round' or 'full' numbers. However, the 'roundness' of total sums prevail on building accounts inscribed on stone e.g. the Epidaurian inscriptions of the construction of the temple of Asclepius (*IG* IV<sup>2</sup> I, 102, 103, 108). See Burford (1971) pp. 71-76. Fehling (1989) pp. 216-239 argues that, in some cases, the typical numbers are made up by Herodotus and do not come from sources. However, in Herodotus' day there existed traditions of numbers such as the number of Persians or of the dead in a battle. See Avery (1973) p. 757, Wyatt (1976) pp. 483-484. Macan (*Comm.* Vol. I) in respect of the numbering of



Nevertheless Herodotus was not interested in economic matters. He said nothing about the financial resources required for the maintenance of such an enormous army. To judge from his narrative, it seems that the naval forces did not demand any particular economic policy. The historian's failure to deal with the financial resources of the Persian army seems to be significant in relation to Persian financial records which are described later in this chapter.

How much the Persian army relied on financial resources becomes evident from the incident between Xerxes and the Lydian Pythios (VII 27-30). Pythios gave to Xerxes a large amount of money (*chremata*) for the maintenance of his army. From an economic point of view, it is worth noting that Pythios' enormous wealth consisted of liquid assets, that is, two thousand Talents of silver and of nearly four million darics. He also possessed land and slaves. Persian individuals owned liquid wealth, that is, *aphanes ousia* in the terminology of late fifth and early fourth centuries Athenian court speeches, together with landed property and slaves (*phanera ousia*). Also, a well-organised bureaucratic mechanism was developed within the Persian Empire and thus financial records were kept by state and individuals as well.<sup>276</sup> But Herodotus' account emphasised the immense wealth of the Persian nobles and the tragic fate of Pythios himself.

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Xerxes' forces argues that 'the data are themselves manifestly unsound, the initial mistake generates a self-multiplying aberration'.

<sup>276</sup> From the Pythios episode the function of the king's gift giving emerges. As result of institutionalised guest-friendship, the king repaid the loyalty and the benefaction of his subjects with lavish gifts. The Persian kings used to offer gifts not only to humans but also to objects such as trees, for instance, Xerxes, charmed by the beauty of a tree, left it adorned with gifts and gold ornaments (Hdt VII 31). This attitude was probably related to Persian religion, according to which natural elements were worshipped. The *πολυδορία* of the Great King is well documented by ancient sources (e.g. Thuc. II 97.4, Xen. *Cyrop.* VIII 2.8, Athen. *Deipnos.* II 48d-f-49a, Plut. *Artax.* XIV 1).

The cost of four hundred talents for the dinner, which the Thasians offered to the army of Xerxes, indicates the large-scale provisions required for the army (VII 118). Provisions in grain were brought from Asia by the ships of the Persian navy for the needs of the army (VII 148.3).<sup>277</sup> Again, the historian was aware of the large quantities of grain consumed by the Persian army and estimated as quantity of 110,340 medimnoi of grain for the needs of the army.<sup>278</sup> In addition, he gives an account of economic activities, which are related to military operations. At the region of Athos a market (VII 23.4) was held in order for the Persian army to meet its everyday needs.

Herodotus deals with the response of the Greeks to the Persian campaign against them (VII 140-162). The Athenians sent men to Delphi to ask for an oracle. The interpretation of the Delphic oracle was vital to the preparation of the Athenians for the forthcoming military encounter with the Persian army.<sup>279</sup> The Greeks decided to terminate all fighting between Greek cities. Also, they sent men to Persia to gather information about the Persian army. Finally, they asked Gelon, the tyrant of Syracuse,

<sup>277</sup> Troops typically brought along rations for a limited number of days. An ancient soldier on campaign could have got by on little more than 3,000 calories per day. See Krentz, 'Greek War' in *CHGRW* forthcoming.

<sup>278</sup> The quantity of grain given by Herodotus was sufficient to feed a large army (certainly, not as large as the Persian army, according to Herodotus' account) for a short period of time. If the daily ration for a soldier was 3 choinices, that is, 0,0625 medimnoi, then a large army as 2,641,610 men would need around 165,100 medimnoi of grain per day. Some data for the consumption of grain seem valuable. The consumption of wheat and barley for a grown man has been estimated to 10 medimnoi a year. Thus the annual consumption of grain in Athens in the fourth century has been estimated around 2 ½ to 3 ¼ million medimnoi of grain on the basis that the population of Attica numbered 300,000 to 400,000. In the year 329/8 in Attica the production of barley was 363,400 medimnoi and 39,112 medimnoi of wheat. Grain produced in the cleruchies of Skyros and Imbros was 270,000 medimnoi of barley and 70,000 medimnoi of wheat (*JG II*<sup>2</sup> 1672 ll. 263-299). See Isager, Hansen (1975) p. 19.

<sup>279</sup> The influence of oracles on political decisions made by Greek states was considerable. It is true that 'Greek political processes can scarcely be studied in purely secular terms'. Undoubtedly, warfare was the sphere of operation *par excellence* for divination. Parker (1985) pp. 298-326 maintains that no clear case of disobedience to a specifically solicited oracular response is recorded and thus Herodotus' passage (VII 148-9: the Delphic oracle to the Argives) is probably apologetic fiction. See Bowden (2005). The significance of oracles for confirmation of new policies and for state decision-making is apparent throughout the classical era, e.g. Plato *Laws* 759c, Lyc. *Leokr.* 24.99, Dem. 21.51, Thuc. VIII 1.1, V 16.2, III 96.3 (with Dover (1988) pp. 65-73), Soph. *O.T.* ll. 69-72, 711-725, 788-793, 945-949 (scepticism on oracles), 386-388 (dispute on the status of soothsayers), Soph. *Antig.* ll. 1055-1056.

for help. Furthermore, Herodotus' narrative gives in detail the action undertaken by the Athenians and the Argives, faced with the approaching Persian danger.

To what extent were the Greeks preoccupied with their financial resources for the war against the Persian army, according to Herodotus' narrative? I think that the following issues, which are raised by Herodotus, can be read from the perspective of economics. First, the historian's long digression on the significance of the construction of the Athenian fleet and, consequently, on the importance of naval battles for the course of the war (VII 142-144). Second, the help that Gelon, the tyrant of Syracuse, promised to the Greeks in the form of triremes, hoplites and cavalry (VII 158.4, Scholiast to Pindar, *Pythian Odes* 1.146b, Diod. XI 21.1).

According to Herodotus, the Athenians, due to Themistocles' initiative, spent the revenue which came from the mines of Laureion on the construction of 200 ships for a war against the Aeginetans.<sup>280</sup> In the historian's words, the construction of the fleet proved to be decisive for the Greek war against the Persians.

Gelon's large number of triremes and his large military forces were related to the building of new war ships and to the new tactics required in the war at sea. They also indicate the prosperity of the Greek cities in the West under tyranny, which enabled them to acquire a large fleet and to maintain substantial military forces.

In conclusion, Herodotus' account of the motives and the preparation of the Persian Wars did not focus on their economic aspects. From Herodotus it derives that money

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<sup>280</sup> It seems that standard economic policy up to that time was the distribution of the income derived from mines to citizens, e.g. the income from the silver and gold mines of Siphnos (Hdt III 58-59).

was a motive for the Persian wars and the preparation of the whole enterprise needed financial resources. But Herodotus underlines the role of other factors such as revenge and oracles which determined the causes and the preparation of the war.

### **3. The battles in the Persian Wars and Herodotus' account of their economic aspects**

The Persian Wars were fought in the hoplite battles of Thermopylae, Plataea and Mykale and in the naval battles of Artemision and Salamis. What was the historian's account of these battles?

In Herodotus' account of the hoplites battles the following elements are important. First, the historian underlines the heroic character of the conflict. For instance, the battle of Thermopylae became a symbol of heroism and of the Greek virtue, which made the Greeks fight for their liberty and for the ideals of their *poleis* (VII 202-233). The epigrams quoted by Herodotus demonstrate the idealisation of the virtue of the three hundred Spartans (also, Diod. XI 6)<sup>281</sup> in the same way that Marathon became a symbol of the heroism of the Athenians (VI 103-118).<sup>282</sup> The victory at Plataea was the greatest achievement of the Greeks in the course of the Persian Wars.<sup>283</sup>

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<sup>281</sup> Plutarch (*Peri Her. Kak.* 32) accused the historian that he had painted even Leonidas' heroic deed in dark colours (ἡμαυρώκε). As for the number 300 Lacedaemonians, it seems to be typical in accounts of Spartan heroism e.g. in Simonides LXV (in Campbell *Greek Lyric* III) 300 Spartans fought over Thyrea against as many Argives. Probably the number 300 hoplites was connected with the archaic λόχος (company), which consisted of 300 men. The picked warriors in an army were probably 300 men, e.g. 300 Argives in the Battle of the Champions, ca. 545 (Hdt I 82), 300 Athenians helped the Megarians in the battle of Plataea, Thebes' 'Ἱερός Λόχος' of 300 men. The Spartan 300 picked men were called *hippeis* (Thuc. V 72.4). See Kamboures (2000) pp. 54-59.

<sup>282</sup> The legendary character of Marathon is well attested. For example, the dedications of the Athenians to Delphi after their victory at Marathon (ML 19=Fornara 50) and the memorial monument of the polemarch Kallimachos (ML 18). There are Athenian epigrams on the Persian Wars (Simonides XX a,b, XXI, Plato *Menex.* 240c, *Laws* 692 d-e, 698e). Thucydides (I 18.1, 73.4, II 34.5) presents the Athenians as the victors of Marathon, probably exaggerating the contribution of the Athenians to the

Second, Herodotus' narrative emphasizes the characteristics of the hoplites warfare. According to his account of the battle of Marathon, the Greeks fought in packed lines in a close battle and thus they took advantage of this formation over the Persian army. In the same flavour is given the battle of Plataea. The formation of the Greek army was the formation of a hoplite phalanx, where the right wing was the strongest and was therefore occupied by the Spartans.<sup>284</sup> Again, the Greeks were victorious at Mykale (IX 96, also, Thuc. I 89.2, Aeschylus *Pers.* 1.728) because they fought in a dense phalanx.

Third, Herodotus' account of the hoplites encounters in the Persian Wars reveals a degree of development in Greek warfare and in the objectives of the Persian Wars. For example, in the battle of Plataea helots joined the Spartan army. Seven light-armed helots accompanied each Spartan hoplite (IX 10, 28).<sup>285</sup> Also, 5,000 hoplites

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battle (see the word *μόνοι* in I 73.4). After the battle of Marathon a new issue of Athenian coinage appeared, a commemorative type, with Athena's head crowned with olive and waning moon. Another interesting aspect of a nearly mythical idealisation of Marathon is the cult-status of the Greek leaders, e.g. Miltiades is commemorated in a statue group as one of the eponymous heroes of Athens (Pausanias 10.10.1). See Parker (1996) p. 168 no. 54.

<sup>283</sup> Thus Simonides' elegy on the battle (Frs 10-17 West) which is included in Herodotus' narrative. See Boedeker (1996) pp. 223-242. The importance of the victory at Plataea for the Greeks is evident from the representation of the battle on the frieze of the temple of Athena Nike. It is the first visual representation of a historical event. The Greek practice was to use mythological images which alluded to historical events, e.g. the representation of the battle of the Amazons by Pheidias on the Parthenon and by Mikon on the Poikile Stoa alluded to the battle of Marathon. See Hall in *Achaem. Hist. XI* pp. 108-133.

<sup>284</sup> See Lazenby (1985) ch. 4.

<sup>285</sup> In chs. 5, 6 we will see that during the Peloponnesian War the role of the helots in the Spartan army became significant. However, the threat of a helot revolt remained strong during the classical period and thus Spartan policies aimed at preventing a potential helot revolt. Especially the threat of the Messenian helots affected Spartan politics, since their hatred for the Spartans was fuelled by nationalism. Despite the fact that helots joined the Spartan army and some of them formed a new social group, that is, the *neodamodeis*, the brutality of the Spartans towards helots and the hatred of helots towards the Spartans did not change dramatically during the classical era (Myron 106 *FGrH* fr. 2, Thuc. 4.80, Plut. *Lyk.* 28.1-3). The conspiracy of Cinadon in 397 BC (Xen. *Hell.* III 3. 4-11) demonstrates the conflict between Spartans and helots. In Xenophon's account the conspirators, who were helots, *neodamodeis*, *hypomeiones* and *perioikoi*, 'were glad to eat the Spartiates raw' (III 3.6). See Hamilton (1991) pp. 68-79, Hornblower (2002) pp. 118-119. It has been argued that the relation between the Spartans and the helots was under normal conditions relatively free from tension (Talbert (1989) p. 30). Lazenby (1997), based on Xenophon's account of the conspiracy of Cinadon, concludes that Sparta was a far more 'normal place' and not a military camp p. 447. Contra Cartledge (1991) pp. 379-381. The fear of helot uprisings generated violence towards helots from Spartans. As a result,

from the *perioikoi* joined the Spartan army (IX 11). At the last stage of the Greco-Persian conflict the role of the navy becomes important even in land battles. The battle of Mykale was a land battle but it was planned as a naval encounter (IX 96), so the fleet was engaged in the battle (Diod. XI 34.2). Finally, the objectives of the Persian Wars were broader since at Mykale the Greeks were no longer engaged in a defensive war but they fought for the liberation of the Greek cities in Asia (IX 105, Diod. XI 34). Thus a broader view of Hellenism enters Herodotus' history (and VIII 144.2).

Fourth, in Herodotus' account of the battles the realism of the military narrative is fused with a mythological concept of military encounter.<sup>286</sup> Thus in his narrative military practices functioned together with religious. For instance, Megistias' divination (VII 219) and the Delphic oracles (VII 220-21) in the narrative of the battle of Thermopylae. Similarly, the narrative of the battle of Plataea (VIII 133-IX 89) is coloured with oracles (VIII 133-5, IX 42-43), with sacrifices before the battle (IX 33-38), prizes for the best warriors (IX 71-5), casualty lists with exaggerated numbers (IX 70) and with many digressions such as those about the Macedonian dynasty (VIII 137-9), about the soothsayers Tisamenos and Hegesistratos (IX 34-5, 37) and about Deceleia and Sophanes (IX 73).<sup>287</sup>

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Spartans often employed violence towards free Greeks (e.g., Thuc. VIII 84.2-3). See Hornblower (2000) pp. 57-82, esp. no. 35.

<sup>286</sup> Herodotus' narrative is full of mythological and religious elements such as divine epiphanies, e.g. the epiphany of Pan before the battle of Marathon (VI 105-6), the intervention of Boreas in the destruction of the Persian fleet (VI 44.2, VII 189) and the epiphany of the Aeacidae before the battle of Salamis (VIII 64, Plut. *Them.* XV 1). See Hornblower (2001a) pp. 135-147. The appearance of heroes fighting on the battlefield was frequent in war narratives. See Kearns (1989) pp. 44-63.

<sup>287</sup> Herodotus' scheme of battles narrative draws on the formulaic Homeric description of battles. See, for example, the battle for the dead Masistius (IX 23) and the battle from the walls (IX 70), (τείχομαχία).

How much were economics involved in Herodotus' narrative of the land battles? Herodotus' account of the battles as such was not concerned with finances. However, Herodotus was aware of the importance of economic reasons for Greek wars. His account of Miltiades' campaign in the island of Paros after the battle of Marathon underlines economic factors (VI 132-6: see the verbs *kataploutiein*, *chryson oisontai* and Ephorus of Kyme (70 *FGrH* fr. 63)). Miltiades' expedition was naval and thus ships, men and money were necessary (VI 132). The Athenian general demanded one hundred Talents (of silver, since the word *argyrion* is used by the historian in the following line) from the Parians. A hundred Talents seem to be a large sum of money for Athens' treasury at that time, if we compare this amount with the one hundred Talents from the Maroneia mines (Ar. *Ath. Pol.* 22.7), which enabled the Athenians to build one hundred triremes.<sup>288</sup>

Furthermore, the whole account of the Greco-Persian encounter underlines the financial factors involved. The Thebans advised Mardonius to send money to the Greek leaders in order for him to win over them (IX 2.3). In their words money is important to Greek morality and defines the endeavour of the Greeks.<sup>289</sup> Similarly, Artabazus said that money was to be decisive for the outcome of the Persian war against Greece. The abundance of Persian money (as coined money, χρυσὸν ἐπίσημον and as bullion, χρυσὸν ὀσημον) becomes, in Artabazus' argument, a powerful means for winning a war (IX 41.3). Moreover, his understanding of the principles of war is advanced in comparison with Mardonius' traditional view that war is won because of the superiority of an army (IX 41.4).

<sup>288</sup> The fine of fifty Talents imposed on Miltiades was a large amount of money itself but payable by a well-to-do Athenian citizen (VI 136.3 and Diod. X Fr 30). Similarly, Callias, Cimon's son, paid a fine of fifty talents (Diod. X Fr. 31).

<sup>289</sup> The Theban leaders when accused by the Greeks of medism believe that they will escape punishment giving money to the Greeks from the state treasury (IX 87).

Much of economics exists in Herodotus' account of the booty from the battle of Plataea (IX 80-1). The spoils were precious objects of gold. Among them, talents which were given to Pausanias.<sup>290</sup> Moreover, what was stolen from the Persian spoils by the helots was sold to the Aeginetans.<sup>291</sup> Hence Herodotus' statement that the Aeginetans owed their wealth to the Persian spoils from the battle of Plataea.<sup>292</sup> Thus economic transactions were embedded in warfare. Finally, Herodotus' account of the dedications of the Greeks to the temples of Delphi and Olympia as the tithe (δεκάτην) from the Persian spoils belongs to an economic context, since throughout time this practice functioned as a financial mechanism, which enabled the Greek states to make loans from the treasuries of the gods.

In addition, Herodotus' account of the siege of Sestos by the Athenians in the aftermath of the Persian Wars is concerned with economics and reveals the new practices performed by the Athenians, which led to the establishment of their *arche*. The Persian rule of the city gave a good reason for its siege by Athenian forces. But the whole enterprise gave a great profit to the Athenians, since booty (Herodotus' word is χρήματα) was carried off to Athens after the capture of the city. According to Diodorus (XI 37.5), the Athenian general Xanthippus established a garrison in the city. Thus this very last episode in Herodotus' *History* foreshadows the principles and the practices of the next Greek war, that is, the Peloponnesian War.<sup>293</sup>

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<sup>290</sup> Plutarch (*Arist.* 20.3) gives the figure of 80 T for the booty carried off from Plataea. In Thucydides (II 13.4) the σκῦλα Μηδικά seem to be considerable in the total sum of 500 Talents. See Pritchett (1971) ch. III.

<sup>291</sup> This is an early example of the official booty-sellers, the λαφυροπῶλαι, operating in a later time (Xen. *Lacæd. Polit.* XIII 11, Xen. *Anab.* VII 7.56). Hodkinson (2000) ch. 5 discusses the practice of official booty selling as a financial resource for Sparta.

<sup>292</sup> Herodotus is probably wrong in his statement because the Aeginetans enjoyed prosperity from an early period. The wide spread circulation of their coinage from the archaic period is evidence for this. Moreover, they contributed 30 triremes for the battle of Salamis (VIII 46).

<sup>293</sup> It is common in Herodotean scholarship to ask such questions as to what extent did Herodotus draw on the political and economic realities of his contemporary Athens? How often did he insert references



So far we saw that Herodotus' history deals, to a great extent, with hoplite warfare. Undoubtedly, hoplite warfare was significant for the development of the Greek *polis*.<sup>294</sup> Aristotle (*Polit.* 1297b 23-25) observes that throughout the development of the *polis* the constitutional governments (*politeiai*) were affected by the growth of the strength of the armed citizens (the wearers of heavy armour). Aristotle's statement gave impetus to the discussion about the so-called hoplite reform and its importance for the evolution of the institutions and warfare of the Greek *polis*. It has been argued that the hoplite reform was a political and social phenomenon.<sup>295</sup> But the modern consensus is that 'a technical progress in arms is not synonymous with a new battle formation, and mass fighting cannot be invoked as constituting a change in social relationships'.<sup>296</sup>

However, hoplite warfare was not dependent entirely on the *polis* financial resources, but it was the wealth of individuals which defined the status of hoplites.<sup>297</sup> Citizens became hoplites only if they could afford their armour.<sup>298</sup> Moreover, the army of

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to the present into his fictional and historical material? How far did his view of contemporary Athens condition his approach to his material? See Blösel (2001) pp. 179-97.

<sup>294</sup> The first representation of hoplite battle appears on the Chigi Vase (ca. middle seventh century BC). See Osborne (1996) pp. 245-248, Snodgrass (1965).

<sup>295</sup> Cartledge (1977) pp. 11-27.

<sup>296</sup> Pritchett (1985). Hanson (1989) pp. 63-84 maintains that 'because the adoption of the panoply represented a technological, not a tactical, breakthrough, it must be seen as a purely military, rather than a political or social phenomenon'.

<sup>297</sup> See Garland (1972) pp. 62-66. The distribution of wealth to different groups from aristocrats to land owners and then to merchants affected not only the status of hoplites but Greek warfare as a whole resulting in the introduction of new tactics of warfare from the end of the fifth century towards the fourth century.

<sup>298</sup> It is still a question how much a panoply cost. Was it expensive or cheap? On the evidence of Aristophanes' *Peace* (ll. 1224-40) and of three inscriptions (the Athenian decree concerning a cleruchy at Salamis, late sixth century (*IG I*<sup>3</sup> 1 ll. 9-12), the Attic Stelae recording the confiscated property of Hermocopidae, ca. 414 BC (*IG I*<sup>3</sup> 422, ll. 266-7), an inscription from Ceos, early third century (*IG XII* 5, 647 ll. 28-31)) an estimation of 30-264 dr. has been proposed for the period 404/3 (Prost (1999) p.71). Such an estimation is large. We can assume that a panoply was not very cheap but its cost was affordable for many citizens, especially at the time of the Persian Wars when the role of hoplites was significant. A cost of a panoply estimated to 77 up to 82 dr. seems reasonable. The cost of the armour can be compared with the amount of 200 drachmae for ransoming, which was standard in most Greek cities around 500 BC (Hdt V 77.3, VI 79.1); by 400 BC, the standard rate had fallen to 100 drachmae (Androtion *FGrH* 324 f 44, Diod. 14.102.2). See van Wees in *CHGRW* forthcoming. At the time of the

hoplites was a civic army.<sup>299</sup> Success in the battlefield was not entirely determined by financial resources. Since the main formation of the hoplites army was that of phalanx, namely a formation in packed lines, qualities such as unity, accord, association on the side of the soldiers were demanded.<sup>300</sup> In addition, their weapons and armour, namely the great size of their shield (Diod. XI 7.3) and the great size of their spear (Hdt VII 211.2), made the Greeks superior to the Persians in the battlefield.<sup>301</sup> Hence Herodotus described only the military tactics required for a hoplite encounter and emphasized the heroism of the fighters. Throughout time and, especially in the course of the Peloponnesian War, changes occurred in the hoplite warfare. Hoplites received payment from the city and thus the *polis* money was involved in hoplite warfare.<sup>302</sup> Such a development becomes evident in the histories of the Peloponnesian War and hence these military changes affected the public finances of the *polis*. But in Herodotus' account of hoplites battles the *polis* finances are not considered.

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Athenian *arche* a panoply was required from the allies in order for them to attend the Panathenea (e.g. the decree for the foundation of the Athenian colony at Brea (ML 49=Fornara 100, ll. 11-12), the decree for the tribute assessment of 425/4 (ML 69=Fornara 136 ll. 57-58) and the decree of Cleinias for the payment of tribute (ML 46=Fornara 98 ll. 41-43)).

<sup>299</sup> Thus the military training of the citizens was at the expense of the city itself. However, military training does not mean that hoplites were professional warriors. But military qualities were highly appreciated: 'all accomplishments and pursuits in the military sphere are both honourable and valuable to a man' (Plato *Laches* 181e-183b). Despite the predominance of hoplite-citizens in Greek warfare in the late archaic and early classical period, mercenaries were used in many cases, e.g. Greek mercenaries were on Egyptian service in 591 BC (ML 7=Fornara 24) and Croesus recruited Greek mercenaries for his war against Cyrus (Ephorus (70 *FGrH* Fr 58b,c, Hdt I 77).

<sup>300</sup> When did the phalanx reach its classical form? It has been proposed that the hoplite phalanx reached its classical form in a period about 650 BC. See Cartledge (1977) pp. 12, 20. On the basis of iconographical evidence (representations of warriors and battles) dated to the sixth century, it has been argued that 'the Greek style of fighting throughout the sixth century remained much the same as in the time of Tyrtaeus. The first hints of change come only at the end of the century'. See van Wees (2004) pp. 174-177, esp. p. 177 with Plates XIX-XXI. The Greeks fought pitched battles from an early period. Pritchett (1985) pp. 33-93, van Wees *G&R* 41 (1994) pp. 1-18, 131-155.

<sup>301</sup> Anderson in Hanson (ed) (1989) pp. 15-37

<sup>302</sup> There is no evidence that at the time of the Persian wars military pay had been introduced in Athens (Ar. *Athen. Polit.* 27.2). Military pay was introduced in Athens no later than 441 BC, and possibly as early as 460s or 450s (Loomis (1998)).

It is noticeable that, despite changes in warfare with the wide-spread use of light-armed troops and despite the predominance of naval power in Greek wars from the Peloponnesian War onwards, throughout the classical period the Greeks maintained the concept of the superiority of hoplites at war. The so-called hoplite ideology dominated the ideological perception of martial virtue.<sup>303</sup> This explains the opening lines of the *Old Oligarch* according to which the hoplites were brave (*gennaioi*) and virtuous (*chrestoi*). It also explains the nostalgia of the warlike Acharnians in Aristophanes for the good fighters at Marathon (*Ach.* ll. 697-8).<sup>304</sup> It was probably the predominant hoplite ideology which explains the episode of the hoplite fighting at Psyttaleia, embedded in Herodotus' account of the naval battle of Salamis,<sup>305</sup> and Aeschylus' line that 'the Athenians fought with spears for close combat and shield-bearing armour' (*Pers.* l. 240).<sup>306</sup>

Did Herodotus' account of the naval battles of Artemision and Salamis give their economic aspects? In the battle of Artemision (IX 1-17) many Greek *poleis* contributed warships. The total of one hundred and twenty seven Athenian triremes demonstrates the importance of Athens in naval affairs during the Persian Wars (and Pindar *Dithyr.* Fr.77, Simonides XXIV). Money was involved in the decision-making

<sup>303</sup> See van Wees (1995) pp. 153-178, Hanson (2000) pp. 201-232.

<sup>304</sup> Marathon is presented as a symbol of the virtue of the Athenians in Aristophanes (*Acharnians* ll. 95-96). In my view, this reflects Aristophanes' preference for the old hoplite warfare and his hostility towards the predominant naval warfare during the Peloponnesian War. But if it is so, why did Aristophanes win the first prize at dramatic competitions instituted by Athenian democracy, which was, to some degree, dependent on naval power? This was because changes and innovations in the structure of the *polis* were not immediately understood and were not accepted by the *polis* intellectuals. Furthermore, in Old Comedy contemporary events were often given through tradition and thus 'new' and 'old' were fused together.

<sup>305</sup> See Fornara (1966) pp. 51-54.

<sup>306</sup> Aeschylus commemorated only his participation in the battle of Marathon in his epitaph. In Aristophanes *Frogs* (ll. 1013-1017) Aeschylus is made to prefer hoplite warfare.

of the Greek leaders (Hdt IX 5, 6, Plut. *Them.* VII 5).<sup>307</sup> According to Herodotus, the Greek leaders were bribed with thirty Talents by the Euboeans in order not to withdraw their fleet. The Greeks, because their naval forces were inferior to the Persian, sought superiority in manoeuvre tactics. The tactic of sea fighting adopted by the Greeks at Artemision was that of *kyklos*. In this way, the Greek ships, which were few and heavy, restrained effectively the ships of the Persian fleet, which were many and light.

The sea battle of Salamis (IX 40-95) was the crown of the fighting of the Greeks for their freedom against the barbarian despotism. It was decisive not only for the outcome of Xerxes' invasion of Europe, but because it gave impetus to the naval superiority of the Greeks (Ελλήνων θαλασσοκρατούντων in Diodorus' words (XI 19.6)), especially of the Athenians. The plethora of epigrams demonstrates the magnitude of the Greek victory.<sup>308</sup>

Many cities contributed triremes for the naval encounter. Athens contributed the largest number of warships. The battle was planned to be fought in narrow waters with the advantage of manoeuvre and the effective use of the ships' ram (*Persae* ll. 366-8, Plutarch *Them.* XIV 2, Diod. XI 17, 18).<sup>309</sup> The defeat of the Persians at Salamis resulted in the withdrawal of Xerxes' forces from Greece. The King left

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<sup>307</sup> Themistocles was involved in bribery. The later political endeavour of Themistocles received much contempt. Bribing became a powerful means for his political goals to be fulfilled. Thus Timocreon (fr. 727 in Campbell) condemns Themistocles of being bribed 'with mischievous silver' and he did not restore the poet to his native city of Ialysus. See Campbell (1983) pp. 115-116.

<sup>308</sup> For example, Simonides' poem for the heroism of the Naxian Democritus (*aristeia*) at Salamis (Campbell XIX) and a number of poems written in praise of the Corinthians for their contribution to the sea battle (Campbell XI, XII, XIII). Throughout time the victory of Salamis became Athens' glorious achievement. Thus Athens became Ελλάδος ἔρεισμα (Pindar, *Dithyr.* Fr. 76). Pindar exalted the battle of Salamis (*Isthmian* 5) and Athens received immense praise. In Aescylus *Persae* the victory of Salamis was given from an Athenocentric point of view (e.g. l. 234).

<sup>309</sup> See Hammond (1956) pp. 32-54.

Mardonius with a force of 300,000 men to accomplish the objective of the Persian invasion of Greece. According to Mardonius, the superiority of the Persian infantry and cavalry was to give the victory to the Persians.<sup>310</sup>

In Herodotus' narrative of the actual battle of Salamis there is no reference to finances, although it was a naval encounter. A modern historian has to draw on Plutarch (*Them.* X 3, 4) to understand that financial resources enabled the Greeks to prepare the naval battle at Salamis. According to Plutarch, first, the sum of two obols was given at the public expense to each Athenian family going to Troezen for their daily needs (to buy fruit and hire teachers for the boys). This economic policy was based on a decree proposed by Nicagoras. Herodotus himself mentions that the few Athenians, who remained in the evacuated city of Athens, were poor citizens (πένητας) (IX 51.2). Thus the planning of the battle relied on economic factors. Second, the men, who manned the Athenian triremes, were provided with eight drachmas each (and Arist. *Athen Pol.* 23.1, Kleitodemos *FGrH* 323 f 20). Even if we consider the whole incident as Themistocles' artifice, it still implies the use of public money and also a certain state economic policy, according to which public money was to be used for public expenses. Moreover, it is an early proof that naval warfare demanded money for rations and wages.

However, Herodotus' narrative of Themistocles' activities in the aftermath of the battle of Salamis demonstrates his understanding of the vital role of finances in the course of the Greek wars (IX 111, 112). Themistocles sailing in the Aegean gathered money from the islanders. From Herodotus' text it is not clear whether Themistocles'

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<sup>310</sup> Similarly, in Aesch. *Pers.* l. 808. See Adams (1983) p. 40

greed for money was a matter of personal interest or it had to do with Athens' financial interests, but it shows that profit was important in the thinking of Greek leaders. Such activities undertaken by victorious Athenian generals demonstrate not only the importance of money for the financial resources of the cities but, moreover, such tactics became essential for the imposition of the Athenian *arche* at the time of the Athenian empire.<sup>311</sup>

In order to understand the extent to which Herodotus elaborated the financial resources required for Greek sea warfare, it is necessary to consider the process towards the strengthening of the naval power of the Greek *poleis*, especially of Athens, at the time of the battle of Salamis. Themistocles' naval programme resulted in the building of the Athenian fleet (Hdt VI 142-4, Plut. *Them.* XIX, Arist. *Athen. Polit.* 23.4, 24). Themistocles' activities provided Athens with the financial resources for the rebuilding of the destroyed city and for its fortification. It was the ingenious initiative of Themistocles to equip the Piraeus' harbour and thus to make the Athenians maritime people. The building of the Athenian fleet was not the mere result of Themistocles' naval programme but the result of a gradual build up over a longer span of time.<sup>312</sup> Athens possessed warships before Themistocles' naval programme (e.g. the twenty ships given to the Ionians at the time of the Ionian revolt (Charon of Lampsacus *FGrH* 687b F 5)). But Athens possessed a small number of warships. Thus twenty ships were given to Athens from Corinth for the war between Athens and

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<sup>311</sup> Themistocles' activities as well as Miltiades' (Hdt VI 132-3) or Peisistratus' activities in Thrace and Macedonia (Hdt I 64, Arist. *Ath. Polit.* 15.2) earlier make clear that Athenian economic expansion was attempted from an early period and it was vigorously exercised within the framework of the Athenian *arche* in the fifth century.

<sup>312</sup> Undoubtedly, Athens was a naval power from the early archaic period as colonization, trade (mainly pottery trade) and, partly, the circulation of its archaic coinage prove. But what was in its making and thus attracted the historians' consideration was the formation of a *polis* navy, consisted of triremes, the new type warships. So our argument emphasizes this aspect of the growing naval power of the Greek *polis*.

Aegina (in fact ‘sold’ at the price of five drachmae for each of them, Hdt VI 89). Not only the *poleis* but individuals possessed warships. According to Herodotus, the Athenian Kleinias fought with his own ships at Artemision (VIII 17). He campaigned with 200 men on his own ship.<sup>313</sup>

The ancient sources make clear that the construction of a fleet of triremes at Athens at the time of the Persian Wars was in progress. Hence if at the time of the battle of Salamis the Greek city-states constructed their fleet of triremes (or increased the number of their ships and their naval power), then apparently Herodotus did not consider the financial factor as crucial for the sea-battle of Salamis. This topic will receive further discussion in relation to the question to what degree the growth of Greek sea-power affected Herodotus’ perception of economics.

#### **4. Herodotus on economic issues**

Now I shall discuss certain passages in Herodotus’ history with a view to establishing the degree to which he engaged in economic thought. Moreover, I shall explore whether Herodotus treated certain economic practices as such or else he ‘embedded’ them in the reasoning on other principles than economic.

I begin with Herodotus’ view of coinage and coined money. According to Herodotus (I 94.1), the Lydians were the first who issued gold and silver coins and became

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<sup>313</sup> In Herodotus there are some other references to individuals who owned private ships e.g. Philippos of Croton (5.47) and Miltiades, son of Cimon (6.39, 41). See van Wees (2004) pp. 206-209.

*kapeloi*.<sup>314</sup> In the previous paragraphs (I 92, 93) the historian described the gold possessed by the Lydian king and his rich offerings to Delphi. Also, he mentioned the gold dust on mount Tmolus (the gold dust in the river Pactolus and thus the proverbial expression *pactolus*: V 101.2, Bacchylides 3 ll. 44-5). Therefore in the context of Herodotus' narrative, it seems that possession of abundant precious metals led to the issue of Lydian coinage.

Herodotus gives an account of the finances required for large-scale works such as the tomb of Alyattes (I 93). The work was the product of the financial contribution of retailers, craftsmen and prostituting girls. Probably all these people possessed liquid money due to their profession.<sup>315</sup> Similarly, the historian while describing the construction of the Pyramid of Cheops, gives the large sum of 1,600 talents of silver spent on supplies of purgatives, onions and garlic (II 125). In Herodotus' view the total amount of money was extremely large. The sums spent on this work were inscribed in the Pyramid in a similar way that the Greek *poleis* kept their records of public expenditure from the archaic period onwards.

Again, Herodotus' interest in currency appears in I 54. Croesus gave to the priests of Delphi two staters of gold. The use of the word staters (instead of the often used term

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<sup>314</sup> Herodotus' reference to the coinage of the Lydians and to their prosperity can be discussed in relation to Alcaeus' reference (fr. 64) to the sum of 2,000 staters, which the Lydians gave to the Lesbians, in order for them to banish the tyrant Pitaccus. The early use of the term *stater* is interesting. See Seaford (2004) p. 89. It is not clear whether Alcaeus' 'staters' were coins or units of weight. However, the *stater* was the predominant denomination in early coinage. There is evidence for the use of the word *stater* in inscriptions dated to the sixth century BC. Nicolet-Pierre (1977) pp. 70-76 gives a list with early inscriptions, where the word *stater* appears. For most of them it is not clear whether they refer to coins or to units of weight. The entire argument depends on the date we accept for the origin of Greek coinage and the date of the first issue for certain Greek cities (see ch. 2). Herodotus' passage has been widely discussed in connection with the origin of coinage. See Smith (1987) pp. 162-166 with bibliography. He points out that Herodotus is correct in claiming that the Lydians invented coinage but he has anachronistically referred to the normal metals used for coinage in his day.

<sup>315</sup> For women's prostitution see Kurke (1999) ch.6. She focuses on two practices: bride auction and temple prostitution. She argues about two competing long-term transactional orders, civic and sacral, which are two different systems of the exchange of women.



talents) implies coinage. Moreover, Herodotus understands the importance of pure metallic currency (IV 166.2). Aryandes' issues of pure silver were put in circulation at the same time with Darius' issues of pure gold. The importance of metals for issuing coinage becomes clear from a passage in Herodotus (III 96.3), according to which the Persian king accumulated the tribute paid in Talents of gold and silver and issued coins, when it was necessary. Herodotus knew about plated coins issued at a time of emergency. Such a coinage was Polycrates' issue in lead and plated with gold at the time of the Spartan siege of Samos (III 56).<sup>316</sup>

Herodotus says more about coined money and liquid wealth. The account of Glaukos to whom a Milesian man bestowed his money (VI 86) provides evidence that people possessed liquid wealth and, moreover, that property was estimated in coined money.

In Herodotus' history men acquire wealth because of their profession. Thus the doctor Democedes (III 131) received for his service one talent from the treasury of Aegina, one hundred minae from the Athenians and two talents from the Samian tyrant Polycrates.<sup>317</sup> Democedes' payment from the public treasury implies an economic policy employed by the cities according to which public needs were met at state expense. It seems unlikely that doctors received such large sums of money but what is interesting is that pay for professionals was established in the Greek cities.<sup>318</sup> The *hetaira* Rhodopis made good money due to her services in Egypt (but Herodotus disputes the construction of a pyramid at her expense, II 135).

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<sup>316</sup> Five such coins were found (tetradrachms, diobols and obols). At the time of Polycrates, a great volume of 'winged' boar/mask of lion coins on Lydo-Milesian standards was issued. It was intended for the payment of mercenaries employed by the tyrant. See Barron (1966) ch. 1: Period I.

<sup>317</sup> Herodotus' account of Democedes' story follows an epic pattern. See Griffiths in *Achaem. Hist II* pp. 37-51).

<sup>318</sup> Loomis (1998) p. 82. There is evidence from Delos that the pay for doctors was 250 drachmae per annum. See Thomaides (1987) pp. 273.

Money was involved in many of the transactions of the citizens. Thus the marriage of the daughter of the tyrant Cleisthenes, Agariste, was sealed with one talent of silver given to each of her suitors (VI 130). Such amount of money was probably available to tyrants whose prosperity is well reported in Herodotus' *History*.

The following passage, in my view, reveals Herodotus' understanding of more sophisticated economic practices. In II 136 Herodotus says that the king of Egypt Asychis in order to overcome an economic crisis made a law, according to which a loan could be given to an Egyptian with the body of his dead father as a pledge.<sup>319</sup>

I will finish with Herodotus' passages on trade and on economic policies involved in trade. The Greeks were engaged in trade. Thus when Cambyses campaigned against Egypt some Samians went there for trade (III 139). Again the Samian Colaeus made good profits by trading in Egypt (IV 152). Sostratus of Aegina made the greatest profit by trading (IV 152).<sup>320</sup> Trading demanded markets. Thus markets were found in Greek cities. Cyrus, the Persian king, condemned the markets of the Greeks as places where the Greeks were gathered and cheated each other (I 153). However, Darius was the king *kapelos*, since he first organised the tribute system and his politics were orientated to profit (III 89).<sup>321</sup> In a religious context Herodotus says that the Egyptians used to sell the heads of animals from sacrifices in markets, where Greek traders operated (II 39). The importance of harbours such as Naukratis in Egypt is well illustrated (I 179). Trade was a source of wealth for islanders and hence the Chians did not sell the Oinoussae islands to the Phocaeans out of fear of the islands' potential

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<sup>319</sup> See Doukakes (1996) pp. 189-190.

<sup>320</sup> There is a stone anchor dedicated by Sostratus of Aegina at Gravisca (*LSAG*<sup>2</sup>.439 no. E) with the inscription 'I belong to Aeginetan Apollo; Sostratos had me made'.

<sup>321</sup> See Descat in *Achaem Hist* VIII pp. 161-166.

growth to antagonists in sea trade (I 165.1). Profit was the objective of commercial transactions. Hence the Babylonians used to trade not only the cargo of their ships but also the wood and the fibres by which their ships were made (I 194).<sup>322</sup>

The passages mentioned above demonstrate that economic issues entered Herodotus' history. Moreover, Herodotus understood certain economic practices and the rationale behind the economic behaviour of the individuals and the nations that were subject of his work. The economic issues raised by the historian reveal that from the archaic period onwards the Greek *polis* was in a process of developing economic institutions in order to manage public finances, to achieve prosperity, to overcome financial crises and to deal with antagonism in sea-borne trade, which was an important financial source for most of them.

If we deal with the above passages independently from the whole Herodotean narrative, we can conclude that the historian had seriously engaged in economic thought and that a modern historian can reconstruct certain economic practices taking place in the Greek world on the evidence of Herodotus. But what can we conclude about the meaning of the economic issues raised by Herodotus in their context in Herodotus' narrative? Can we still argue that Herodotus tackled economic issues in order to analyse the 'behaviour' of individuals and of *poleis* and to explain certain topics which entered his historical enquiry?

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<sup>322</sup> For economics in Herodotus see Nenci (1973) pp. 133-146. He concludes that Herodotus does not ignore the economic factors and the logic of the development that changed the structures of the society. But despite his sensibility on economic factors and social structures, he privileged moral values. See also Giaccherio (1969) pp. 91-135. She traces the basic laws of economy in Herodotus *History*.

The answer is no. Herodotus' treatment of economic issues, undoubtedly, allowed certain economic considerations. However, to a great extent, his handling of economic phenomena did not concentrate on their economic role as such. In the context of Herodotus' history, the analysis of economic factors were incidental to and served the elaboration of and the reasoning on other religious, political and ethical phenomena and on what ever seemed miraculous (θᾶμα or παράδοξον) to the historian's eyes. It assists in the understanding of other aspects of human behaviour in which Herodotus and his audience were more interested than in economics.

Let us give some examples. The instance of Glaukos, mentioned above, is given in a moralising context of justice and divine retribution. In his account of Rhodopis' wealth (II 135), Herodotus ends up his story with popular belief about the fame that *hetairai* enjoyed among the Greeks. In Herodotus' comment that in Egypt women worked at the markets as retailers there is no interest in women as working force but only as one of Egypt's *paradoxa* (II 35). In fact, as a fifth century *polis* historian he did not fail to notice the economic 'behaviour' of the *polis* institutions, but in total he did not argue from the perspective of the importance of economic factors for the prosperity of the *poleis* and for success in war.

If this is Herodotus' attitude to financial factors, then we can ask to what extent this attitude was the outcome of the philosophical view of wealth and of the economic behaviour of humans which was established by lyric and tragic poets and dominated the historian's intellectual milieu.

Herodotus, the ‘father of History’ (Cicero *De Leg.* I 1.5) drew on the ideological background of tragedy and so created tragic heroes in his *Histories*. The tragic themes of the initial happiness and final fall of men were employed by the historian.<sup>323</sup> Xerxes’ army, in all its magnitude, was destroyed by the Greeks. Polycrates’ happy life ended up with a disgraceful death. Croesus’ happiness did not last for ever (I 32.6, 207). Also, the incident between Psammenitus and the poor man is a tragic warning that man’s wealth and happiness are subject to change (III 14). In this way, prosperity in the Herodotean concept relies on the philosophical view that successive changes define human *moira* rather than on the principle that successful economic behaviour secures wealth. In this context, divine powers (τό θεῖον) enter the landscape of Herodotus’ history. Thus excessive wealth in Herodotus’ historical understanding proved to be dangerous, since *Koras* (excess) brings *Ate* (blindness) and *Hybris* (arrogance).<sup>324</sup> In this way, the tragic fall of men is determined.<sup>325</sup>

This tragic scheme of changeability of wealth and human happiness was rooted in early Greek poetry. From the Homeric poetry to archaic and early classical lyric poetry, a philosophical view of wealth and money was shaped. The following passages demonstrate the archaic concept of wealth and its function in society. Solon, the Athenian, warns his fellow-citizens that even a great city such as Athens will be destroyed, if the citizens ‘put their trust in possessions’ (fr. 4 in Campbell ll. 5-10). He

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<sup>323</sup> It has been argued that Herodotus’ concept of history relies on the pattern of rise and fall. Thus Herodotus’ political thinking is closely comparable to that of the tragic poets. See de Romilly (1977) ch. 3, Raaflaub (1987) pp. 221-248. Said (2002) pp. 117-147 challenges the usual view of the impact of tragedy on Herodotus’ vision of the working of human life. In her view, Herodotus is not ‘tragic’ but ‘epic’. In the Herodotean world each fall of a ruler is balanced by the rise of another and all disasters have a bright side. This is to be explained by the impartiality and the Panhellenic perspective of Herodotus.

<sup>324</sup> See Lateiner (1982) pp. 97-101.

<sup>325</sup> The role of wealth in Herodotus has been discussed by Perysinakis (1987). The author credits Herodotus’ with a deep understanding of the economic importance of the primary materials, of the geographical location of cities, of the cost of work, of the interaction between countries and of money (ch.1). See Introduction.

goes on to say that the leaders of the people ‘will suffer much distress for their great insolence (*hybris*), since they cannot keep check on their excessive wealth (*koros*) or conduct decently the present joys of their feasting in quietness’. The same idea lies behind the lines: ‘for satiety (*koros*) breeds insolence (*hybris*) when great prosperity goes along with men whose wits are not sound’ (Campbell 4).

Theognis of Megara, speaking from an aristocratic viewpoint, says about wealth and its impact on social structure that in his times ‘it is possessions that people respect’ and thus ‘riches have confused race’ (Campbell 183-92). He uses the imagery of precious metals to give the worth of trustful man (77-8). Although poverty is disastrous for men (173), riches are not for ever, since ‘for Zeus tips the balance now in this man’s favour, now in that: one day riches, the next day nothing’ (157-8). Following the same line of thought, Hipponax uses the image of blind Wealth (Campbell 29).

Pindar was widely concerned with wealth not only as a servant himself of ‘the mercenary muse’ but also because he experienced the transition from the archaic *polis* to the classical one. Pindar’s muse inspires poets only when she is rewarded (*Pyth.* 11 ll. 41-4: φωνὴν ὑπάγγυρον, *Nem.* 10 l. 43). The poetry of Pindar reflects a time when new forms of wealth appeared whereas citizens were involved in new fiscal practices and the *polis* itself transformed the traditional economic practices, performed by aristocracy, in a civic economy (e.g. *Pyth.* 5).<sup>326</sup> In the context of his poetry the ethical view of wealth and money is predominant, since *sophrosyne* is the required value for

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<sup>326</sup> Thus the aristocratic economic behaviour, which relied extensively on gift-giving, had been replaced by liturgies in democratic cities. Cities progressively administered their financial resources and kept records of their expenses (see ch. 1).

the happiness of his praised tyrants to be secured (e.g. *Pyth.* 4 ll. 139-41, *Pyth.* 5 ll. 1-4).<sup>327</sup>

The passages discussed above reveal that in lyric poetry wealth was perceived in a moralising way and the perils derived from wealth and, more specifically, from excessive wealth, were underlined. Also, the possession of riches by new people was considered to be dangerous for the social structure. This moral concept of wealth in archaic times was fused in the tragic scheme of human disaster due to excessiveness. Thus Herodotus maintained this archaic perception of wealth and money since his heroes, as the examples given above revealed, experienced the perils of wealth.

From this point of view, the topic of economics in Herodotus has been studied by Kurke (1999). Her work emphasizes the aristocratic attitude to precious metals, money and coinage. In particular, her work underlines an ongoing struggle over the constitution of value and who controlled the highest spheres of exchange, between the traditional elite and the emerging city-state. In contrast to the dominant market-based accounts of early coinage, its symbolic character is emphasized in this work.<sup>328</sup>

In my view, Herodotus' *Histories* did not reproduce entirely the aristocratic attitude towards wealth and money, for, as we argued before, the historian revealed an understanding of economic policies and of the economics of Greek warfare, which

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<sup>327</sup> Pindar's view of wealth and money is studied by Kurke (1991). She draws the conclusion that Pindar was attempting to modify and modernize the behaviour and the attitudes of a reluctant aristocracy.

<sup>328</sup> See Introduction. Von Reden (1997) pp. 154-176, embarking similarly on a culturally-based approach to money and coinage, stresses the ideological constraints of money use created by the ethical frame of the *polis* and the uneasy fit of coinage with honour, the body and self, which were part of that frame-embedded money economy. In particular, she maintains that in Herodotus we can find the traditional system in which coinage figured as a negative *sema* associated with anti-aristocratic qualities and a non-aristocratic opposition in which coinage was accepted as positive means of valorizing the self.

were related to a developing *polis* economy. In many cases, economic issues are worked out from an economic perspective and thus coins are regarded as a legal means of exchange when certain economic practices are regarded as profit-orientated. In this way, the historian in some cases departs from the morality of money and wealth derived from poetry. But his narrative at large kept economic considerations in its periphery and made them a means for reasoning on various topics.

Undoubtedly, there exists a pattern of traditional or else archaic thought in Herodotus' account of economic issues.<sup>329</sup> However, at the same time, a broadening of the traditional view of the role of finances in the structure of the *polis* was achieved by the historian. This can be explained by the following reasons. The very subject of his *History*, that is, the Persian Wars, defined the end of the archaic period and inaugurated a new period for the Greek city-states. Herodotus himself experienced the Athenian democracy at the time of Pericles and he joined the philosophical debates of the intellectuals of his time. Moreover, he experienced the growth of Athenian naval empire and the enrichment of new social groups due to maritime power.

All these factors affected his concept of history. Whereas his main historical concern to glorify great achievements in the past (*Prooimion*) entails the poetical concept of the past, his claims for investigation into the past made him aware that different ways of interpretation of the past were available to him than those employed by poetry. In this way, he attempted to reason on the causes of war, to explain the rise and the fall of individuals, cities and empires and to question his own sources. In this attempt, the

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<sup>329</sup> In this context, the use of the word 'archaic' does not mean that in the archaic period the *poleis* had not developed a concept of public economy and that money was not in use. Greek coinage and archaic inscriptions, discussed in this thesis, reveal a developing monetary public economy. The word 'archaic' is used as a convention to describe practices and ideological conceptions established before the rapid development of the Greek *polis* after the Persian Wars.



principles of the fifth century *polis* are fused with traditional values while the rational and the irrational determined the historian's interpretation of the past.<sup>330</sup> In my opinion, changes in the *polis* institutions affected his view of economics in the same way that they affected the view of the tragic poets.

Undoubtedly, fifth century tragedy dramatised myths which belonged to a pre-monetary era. But the elaboration of myths by the tragic poets left ample room for the new monetary reality and the new man of money to appear. Thus in many tragedies the mythical or better the traditional perception of money meets the new reality of a monetized society, making possible the contrast between two different concepts of wealth and money. For example, in Sophocles *Oedipus Tyrannus*, Oedipus alleges that money was the main motive for Teiresias' behaviour (ll. 380-9). In the entire tragedy money prevails in Oedipus' thinking. He also appears to maintain the view of a fifth century Athenian citizen who experienced a monetary economy. Similarly, Creon in *Antigone* of Sophocles, who represents fifth century Athenian citizen, is concerned with money. In fifth century tragedy the pre-monetary myths had been worked out through the new concept of money and wealth. However, tragedy never aimed at or never succeeded in acclaiming the new man of money, product of the monetary economy of fifth century Greek *polis*.<sup>331</sup>

What we said above provides a reason for saying that the historian did not entirely maintain the archaic view of wealth and the perils derived from excessive wealth. But what made Herodotus to surpass, to some extent, the archaic moralising view of wealth and, even the ideological background of tragedy, is that he dealt with two

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<sup>330</sup> See van Wees (2002) pp. 321-349. I agree with his conclusion that despite moral and religious dimensions in his work, Herodotus emerges as a 'modern' historian.

<sup>331</sup> For the role of money in tragedy see Seaford (2004) pp. 147-172.

different political structures, that is, the Persian Empire and the Greek *polis* and thus he might be aware of the economic practices employed by them in order for the private and public *oikonomia* to be operated.<sup>332</sup> This applies the second part of the initial question raised in this chapter, that is, whether Herodotus' understanding of economics was the outcome of his understanding of the economy of the Persian Empire and of the Greek *polis*.

## **5. Herodotus on the economy of the Persian Empire**

Let us assume that the political and financial organisation of the empire was open to Herodotus' historical inquiry. We start with the organization and the administration of the empire which affected the structure of its economy.

Many lands inhabited by different ethnic groups made this vast empire.<sup>333</sup> The different peoples of the empire interacted in many ways. The connections between Elam and Babylon in the Achaemenid period are well documented. On the evidence of inscriptions, many people travelled from Babylon to Elam and *vice versa* for commercial purposes, for military service or for state labour service (Dar 442 (Strassmaier (1892), Dar 572). In an inscription (VS IV), for instance, a soldier was to go to Elam from Shippar and his mother gave the commanding officer part of the money for her son's expenses during his military service.<sup>334</sup> Also, many Persians owned land in territories under Persian rule. Persian nobles and the king's benefactors

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<sup>332</sup> In this respect, I find interesting the passage V 29.2, where private and public economic policies are discussed together.

<sup>333</sup> These lands were listed in many royal inscriptions, e.g. in Darius' five lists of the lands of the empire: the Behistun Inscription, the Inscription from Susa (DSe), the Inscription from Naqs-e Rostam (DNa) and the Inscriptions of Persepolis (DPe, DPh).

<sup>334</sup> See Dandamayev (1978) pp. 251-257.

were granted land in certain territories of the empire (e.g. Hdt VII 85.3, Thuc. I 138.5, Plut. *Them.* XIX 7). The interaction of the peoples of the empire created a network of economic relations between them.

A range of high officials operated the bureaucratic system of the vast empire.<sup>335</sup> Two titles, those of spear-bearer (arstibara: DNc) and bow-bearer (vacabava: DNd) were of high status. On the Persepolis' reliefs many officials are represented such as message-carriers and staff-carriers.<sup>336</sup> On the evidence of the Persepolis inscriptions many scribes served at the royal and satrapal courts (Hdt VII, 58, VIII 90.4, Diod. II. 32.5: *diphtherai*). The employment of many officials served the administrative needs of the vast empire. Furthermore, by appointing many officials, the Great King was able to control the power of the satraps and to secure, to some degree, their loyalty and hence the unity of the empire. Also, it affected the organisation of the economy of the empire.

All the conquered lands were administered as satrapies headed by a satrap.<sup>337</sup> Tribute was paid by the satrapies of the empire. In the inscription from Susa (DSe) Darius declares that he rules over peoples who brought him tribute (*baji* in Old Persian). Herodotus provides us with a tribute list (III 89-94). According to Herodotus, some of

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<sup>335</sup> Because of this bureaucratic system it seems plausible that Imperial Aramaic stood for a uniform language of administration. Thucydides (IV 50.2) used the word Assyrian letters for the script of the letters carried by the Persian Artaphernes. See Lewis (1977) ch. 1.

<sup>336</sup> High offices were those of the chiliarch (in Old Persian *hazarapatis*), the Grand-Vizier, the King's Eye (Hdt I 114, Aesch. *Pers.* 980, Plut. *Artax.* XII 1, Arist. *Acharn.* 92) and the King's Ears (Xen. *Cyrop.* VIII 2). See Lewis (1977) ch.2.

<sup>337</sup> The satraps were appointed by the king (Hdt IV 166.1) and were Persian nobles, often relatives of the king (Nabonidus Chronicle III 1.20, Hdt III 120.1). The satraps' loyalty to the King was explicit through the performance of the *proskynesis* (Hdt I 134.1, Xen. *Cyrop.* VIII 6.1). However, many revolts of satraps took place in the Achaemenid Empire (i.e., Aryandes in Egypt (Hdt IV 166) and Masistes in Bactria (Hdt IX 113)), especially in the fourth century BC. Probably this was because of a greater degree of independence that the satraps obtained and because of their involvement in the politics of Greek city-states. See Hornblower in *CAH VI* pp. 45-96.

the satrapies paid tribute in talents of silver and gold (*phoros*) and some others paid in the form of gifts (*dora*). From Herodotus' list derives that a fixing sum of tribute was paid to the king. Darius was the first who fixed the tribute of his subjects (III 89). Similarly, Plutarch (*Memor.* 172) and Polyaeus (VII 11.3) attribute the fixation of the tribute to Darius and add that the tribute payment fixed by Darius was not considered as that heavy for his subjects. In the tributary system after Darius' reorganisation although occasions of contribution in kind appear, there is no evidence of contributions of ships. Nevertheless, at Darius' time the Persians possessed an outstanding fleet. The building of the Persian navy depended upon the maritime peoples of the empire and, more specifically, upon the Phoenician ships (Hdt III 19.3).<sup>338</sup> In a later period the Persian fleet was probably manned by subject peoples but the ships were not in the hands of the subjects.<sup>339</sup> Thus the reorganisation of the tribute system and its partial monetization was partly because of the large expenses for the maintenance of the increasing Persian naval power.

The imposition of different tribute on the satrapies of the empire was based on their financial resources. This practice applies to Aristotle's perception of *oikonomia satrapike* which is concerned with revenue arising from agriculture, from the special products of the country, from taxes, from markets, from cattle, and from other sources (*Oikon.* 1345b).<sup>340</sup> Therefore the sums paid as tribute varied from 170 T to 1,000 T

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<sup>338</sup> Similarly, the Assyrians employed shipwrights from Phoenicia, Syria, Cyprus and other sea lands to build up their ships. Ctesias *FGrH* 688 fr. 16.

<sup>339</sup> See Wallinga in *Achaem. Hist.* I pp. 47-78. He argues that the Persian navy was organised as the Roman navy later and the role of the maritime subjects of the Persian Empire was similar to that of the Romans' *socii navales*.

<sup>340</sup> In the reliefs of Persepolis the ethnic groups bring representative gifts of their production such as animals, armours, precious objects. Herodotus in the passages following his tribute list (III 97-116) gives the special products from the empire's lands.

paid by Babylon.<sup>341</sup> According to Herodotus' calculations, the tribute was nine thousand eight hundred and eighty talents of silver on Euboean standard plus four thousand six hundred and eighty talents of gold in the ratio 1: 13 which gives the total 14,560 Euboean talents. The imposition of different tariffs on the subject-nations of the Persian Empire might have been affected by particular political situations. For instance, an Aramaic papyrus, which gives the exit documents from the Nile Delta in 475 BC, suggests that the Ionian Greeks were treated unfavourably, since the Greco-Persian conflict was still recent and the newly founded Delian League aimed at an anti-Persian policy.<sup>342</sup> Some peoples were excluded from tribute payment (the Arabs, the Nubians, the Colchians and the Aethiopians). According to Herodotus, Persis, the core of the Empire, was exempt from paying tribute (III 97, ἀτελέα). However, on the evidence of the royal inscriptions Herodotus' statement is not accurate. In many cases animals were received as tax from Persia (e.g. PF 267: *bazis* in Old Persian, PF 2070: *bazi* in Elamite).<sup>343</sup>

Apart from the tribute paid to the King, a form of tax might have been paid to the local satraps. Probably the empowerment of the satraps towards the fourth century affected the tributary system. It seems likely that the imposition of tribute by the Persian king followed, in some cases, practices of taxation, employed by the subject-peoples before the Persian conquest. For instance, Babylonia and Egypt had a long

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<sup>341</sup> Babylon was a key province in the empire in geopolitical and economic terms and thus the highest tribute was paid. See Kuhrt in *Achaem. Hist. IV* pp. 177-194, Oppenheim in *CHI II* pp. 529-587.

<sup>342</sup> See Hornblower (2002) p. 63 with no. 32.

<sup>343</sup> See Sancisi-Weerdenburg in *Achaem. Hist. XI* (1998) pp. 23-34. For her, *baji* is the term used by the Persian kings to indicate whatever they thought their subjects owed them in material goods.

tradition in fiscal organisation. Thus it seems likely that the Persian tributary system adopted some practices employed earlier by other peoples.<sup>344</sup>

From the above discussion it becomes clear that the very structure of the empire required a sophisticated fiscal policy. The following parameters, in my opinion, affected the financial organisation of the empire. Firstly, the Achaemenid kings had no permanent residence but throughout seasons resided in one of the palaces of their royal cities, that is, Persepolis, Ecbatana, Susa and Babylonia (Athen. 513f, Xen. *Cyrop.* VIII 6.22, Plut. *Mor.* 78d).<sup>345</sup> Undoubtedly, the presence of the king in a certain place affected the activities of businessmen. Thus in the Murasu texts from Susa (PBS 2/1 126, 128 (Stolper)) the businessmen were in Susa because the king was there.

Secondly, the building projects of the Achaemenid kings affected the organisation of the Persian economy since workers from every single territory of the Empire were engaged in these projects. In addition, high officials served in the kings' building projects. Hence a system of payment was required. Payments within the empire were made in food (Heracleides *FGrH* 689 fr.2). Therefore, an elaborate system of rationing was developed. Darius' Foundation Charter at Susa (DSf) provides evidence that for the building of the palace at Susa materials from all over the empire were brought and workers and artisans from different parts of the empire were employed, according to their expertise (e.g. Iranian stone-cutters and Sardian goldsmiths). Also, the Persepolis Fortification Texts (PF) and the Treasury Texts (PT), dating from a

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<sup>344</sup> Bergson (1965) pp. 1-25 argues that in the Achaemenid tribute system a principle had been applied by the Assyrians. For a full discussion see Briant (1996) ch. 6

<sup>345</sup> See Tuplin in *Achaem. Hist. XI* pp. 63-114.

period *ca.* 500-450 BC, give evidence for this system.<sup>346</sup> These tablets are part of a financial archive at Persepolis, which concerned the transfer and issuing of food rations and livestock to individuals and group of workers and their payment. One of the Persepolis tablets (PF 1224=Fornara 45) refers to rations for Ionian mothers working at Persepolis (*ca.* 500). Officials received a large portion of daily rations. Pharnaces, the chief official in the time of Darius' reign, received a daily ration of two sheep (PF 654), of 90 quarts of wine and 180 quarts of flour (PF 665).

The Kasr Archive gives evidence for economic activities in the empire in a later period (*ca.* 438-400). According to Stolper's description of the archive ((1985) pp. 195-205), sales of urban real estate, arable land and slaves alongside with leases and subleases of feudal holdings, fields and houses are recorded. The archive contains promissory notes for silver secured by pledges of 'feudal' holdings, for grain owned to a temple and receipts for payments of crops as rent on leased and subleased fields, for silver as the purchase price of fields and for silver to support offerings. From the well documented economic transactions taking place in the empire we can conclude that the Achaemenid economy was systematically organised for the needs of the subjects of the empire to be met.

Thirdly, the need for communication between the peoples of that vast empire led to an elaborate royal system of roads (Hdt V 52-54). The royal road system served the communication between the central royal court and the provincial authorities. It also operated military expeditions and the collection of tribute.<sup>347</sup> Post-stations (σταθμοί) and rest-houses (καταγωγαι) were found across the royal roads. Many officials

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<sup>346</sup> See Hallock in *CHI II* pp. 588-609.

<sup>347</sup> See Graf in *Achaem. Hist. VIII* pp. 167-189.

operated the royal road system such as elite guides (*barrishdama*), agents (*katabattish*) who made arrangements for provisions and lodging for travellers in advance, travel assistants (*shaulu*), road counters (*dattimara*) and road surveyors (*shirak*) (Hdt VIII 98). We can assume that a number of workers worked on the royal roads (e.g. Xen. *Cyrop.* VI 2.36). Hence a ration system for travellers had been developed. On the basis of the Persepolis tablets the whole system worked as follows: travellers carried sealed documents issued by the King or satrapal authorities; the documents stated the entitled portion of rations scale for each traveller; receipts sealed by supplier and recipient went back to Persepolis as records of the transaction.<sup>348</sup> Travel rations were supplied to fast-messengers and elite-guides (e.g. PF 1285: the fast messenger Muska received 1 ½ quarts of flour, PF 1317: an elite guide received 100 quarts of flour, the letter of Arsames (Driver (1967) 6): an official received provisions for him, for his servants and for his horses). Such an elaborate system of rationing was established because of the organisation of the royal court and the customs of the Persian kings. In this way, the royal economy and its administration was widely affected.

Fourthly, the wealth of the Persian kings was enormous according to ancient sources (e.g. Plut. *Artax.* XXIII 5). Thus the royal wealth was demonstrated in many activities performed by the kings, which affected the economy of the empire. I will focus on the King's dinner. Polyaeus (IV 3.32) gives a list of the commodities prepared for the king's dinner which Alexander the Great read.<sup>349</sup> How important was the royal dinner for the Persian court becomes clear from Heracleides' account (*FGrH* 689 Fr 2). The magnitude of royal dinner (μεγαλοπρεπές in Heracleides' words) required a well-

<sup>348</sup> For seals in Persepolis' tablets see *Achaem. Hist.* LX, Boardman (2000) pp. 128-134.

<sup>349</sup> See Lewis in *Achaem. Hist.* II pp. 79-87



organised fiscal policy because of large daily expenses. According to Deinon (*FGrH* 690 Fr 12), every single commodity, produced in the king's land, supplied the royal dinner. In his account, imported products were not allowed at the king's table with the exception of Attic wine. On the basis of this statement, trade within the empire can be assumed and a system of importing trade can be detected. According to Deinon (Fr 24), the expenses for the royal dinner were 400 talents per day. In Heracleides' account (fr. 4) the daily expenses for the maintenance of the king and his harem were estimated to 15 Babylonian talents. Such expenses in the royal court demanded a well-organised economy operating in the empire.

The above argument provides us with the concept of a functional and effective administrative and fiscal system in the Achaemenid Empire. Thus it seems reasonable to say that Herodotus had access to extensive recorded material on the economic practices employed in the Persian Empire. Also, that the historian was able to draw on Persian financial documents. Undoubtedly, Herodotus made use of inscriptions (Greek and non-Greek) in order to elucidate his narrative and sometimes argued from epigraphic evidence.<sup>350</sup> In my view, the historian knew much about the economy of the empire. Thus he described the tributary system, the agricultural production of the subject nations, Persian coinage and the royal practice of gift-giving. His record of the Persian tribute is worth noting in its detailed elaboration. Herodotus' successful treatment of the economic aspects of the Persian tribute can be explained, in my opinion, by the following. First, the historian was familiar with the significance of the tribute payments to the public finances of Athens at the time of its *arche*. Presumably he knew political debates in his era about the use or the misuse of the tribute (e.g. the

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<sup>350</sup> Moreover, he was interested in the accuracy of the inscriptions he quoted, e.g. he disputed the authenticity of an inscription at Delphi (I 52). See Raubitschek (1961) pp. 59-61, West (1985) pp. 278-305, Smith (1987) ch. 4, ch. 8.

accusations of Thucydides, son of Melesias, of Pericles' policy towards the use of the tribute). Second, the tribute paid to the king was very large in comparison with the tribute paid by the cities of the Delian League. In this way, the historian made clear to his contemporary audience that the economic potency of the Athenian *arche* was feeble compared with that of the Persian Empire. Moreover, by employing a view of financial resources based on his contemporary reality Herodotus supplemented effectively his predominant poetical view of the abundant wealth of Persia.

However, Herodotus failed to have a consistently deep insight into the Persian economy and, for most of his narrative, maintained the established Hellenic view of the excessive Persian wealth. In his account of the Greco-Persian conflict he did not argue from the evidence of the financial resources of the belligerents and of their importance for the outcome of the conflict. In fact, by reading Herodotus' *History* from the perspective of his understanding of economics in relation to financial documents of the Persian Empire, we conclude that Herodotus lacks a deep understanding of the sophisticated economic practices of the Persian Empire.

Why this? Because, firstly, he probably did not make extensive use of the Persian financial records and he concentrated mainly on his oral sources.<sup>351</sup> Secondly, he did not interpret his Persian material correctly. This means that his experience of the Greek *polis* and his Hellenocentric view of the world prevailed in his understanding of the Persian sources. Thirdly, he did not set out a concept of history, according to

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<sup>351</sup> Herodotus drew heavily on oral sources; He stressed the orality of his sources and, despite his objections, included disputed sources in his narrative (II. 99, VII 152.3). See Fehling (1989), Flower (1991) pp. 57-77. In many cases, only oral sources were available to ancient historians and many of the historians neither question nor reject oral sources as improper for historical writing. This was because orality was predominant in all aspects of Greek culture. Poetry was recited in front of an audience, history was read in front of an audience and orators delivered their speeches at the court or at the *boule*.

which economic factors, although present in his history, were distinguished from other institutions and were significant as such for warfare.

Herodotus' attitude to the Persian Empire shares common elements with that of many Greeks, who maintained a Hellenocentric view of the Persian Empire.<sup>352</sup> The reason for this is not, in my opinion, because the Persian Empire and, in general, the Orient, was *terra incognita* for the Greeks. On the contrary, there were contacts between Greeks and Oriental peoples from an early archaic period as it becomes clear from the orientalizing period in Greek art (*ca.* 720-600 BC).<sup>353</sup> This was because the Greeks developed their understanding of Orient in polar opposition to Greek freedom and individuality. Thus even in the fourth century Xenophon, who in his *Cyropaideia*, made Cyrus, the founder of the Persian Empire, his subject-matter, did not escape Hellenocentrism in his viewpoint.<sup>354</sup>

Furthermore, in Greek works on the Persian Empire the name Medes instead of Persians is frequently used.<sup>355</sup> After Cyrus' conquests, it was the Persians who ruled over the other Iranian peoples and the Medes became subjects of the Great Persian

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<sup>352</sup> Even the name Persian comes from Greek mythology (Hellanicus of Lesbos 687FGrH fr. 1a).

<sup>353</sup> See Gunter in *Achaem. Hist.* V pp. 131-47. On archaeological evidence, for example, the volume of Corinthian and Attic pottery, we can say that commercial contacts between the Greeks and the peoples in the Near East were established from the archaic period. See Salles in *Achaem. Hist.* VIII pp. 191-215.

<sup>354</sup> Sancisi-Weerdenburg (*Achaem. Hist.* VIII pp. 117-131) discussed Xenophon's *Cyropaideia* as an ideal and idealised picture of archaic Persia while contemporary Greek attitudes towards the Achaemenid empire in the fourth century are reflected. Gera (1993) argues that Xenophon's Persian sources were royal Persian chronicles and oral Persian tales. Probably, on the evidence of Athenaeus 633 c-e, Dinon 690FGrH fr. 90, a tradition of court poetry was established (pp. 13-22). In respect of the Persian symposia described by Xenophon, she points out that 'a blend of Greek and Persian customs could be found, while the influence of Socratic symposia is never far from the background'. Tuplin (*Achaem. Hist.* V pp. 17-30) argues that in the *Cyropaideia* Persia is treated not just as *polis* but as an ideal monarchic *polis*. He concludes that Xenophon failed to make Cyrus' world particularly Persian.

<sup>355</sup> Similarly, in biblical sources the Persians are referred as Medes, i.e., *Jeremiah* 51.1, 28. Herodotus used the name Medes for the bulk of his narrative and his wars were *ta Medika* (IX 64.2). However, works entitled *Persica* existed, e.g. Dionysius of Miletus *Persica* (FGrH 687). See Fornara (1971) ch. II.

King. Then why did the Greek writers insist in referring to Persians as Medes even in the fourth century?<sup>356</sup> I think because they found certain similarities between the earlier Median Empire and the present Persian one. Herodotus' *Medikos Logos* probably functioned in this direction (I 96-106). How much did the Achaemenid Empire owe to the Median Empire for its political structure and administrative practices? We cannot give a clear-cut answer but we can assume on the basis of cultural interaction that much of the practices developed by the previous Eastern civilisations were inherited by the Persian Empire.<sup>357</sup>

## 6. Herodotus on the economy of the Greek *polis*

In dealing with economic factors, did Herodotus argue from the evidence of the *polis* economy? In the late archaic period the Greek cities had already developed a system of keeping financial records.<sup>358</sup> Thus there are inscriptions from the archaic period which refer to financial issues. We shall discuss some archaic inscriptions on financial

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<sup>356</sup> See Tuplin in *Achaem. Hist. VIII* pp. 235-256.

<sup>357</sup> Sancisi-Weerdenburg (*Achaem. Hist. III* pp. 196-212 and *VIII* pp. 39-55), discussing Herodotus' *Medikos Logos*, argues that the Median empire was much less of an empire than is commonly assumed and thus the Achaemenid inheritance from their predecessors was limited. The main impetus for state formation and bureaucratic developments should be seen as deriving from the conquest and the external pressures that the possession of vast conquered territories exerted on the internal structure of the conquering society. I agree with the above argument for the orality of Herodotus' sources which are responsible for the picture of the Median Empire as derives from his history. However, even if the Median Empire lacked such a political and financial organisation as Herodotus says, there was a strict political, administrative and financial organization which assisted in the development of the Persian bureaucratic practices for the needs of a vast empire to be met. See Brown in *Achaem. Hist. III* pp. 96-106.

<sup>358</sup> From an early period around the eighth century BC the Greeks started to write down, to keep written records and archives and to 'document the past'. See Thomas (1989) pp. 34-99. Until *ca.* 650 BC Greek inscriptions were private and, in their majority, did not refer to public affairs or economic issues. With the spread of literacy the function of writing was expanded to many fields and thus inscriptions refer to a variety of public issues. See Immerwahr (1990) ch.8, Powell (1991) pp. 119-186, esp. p. 186. Throughout time the Greeks developed great respect for their archives and their authenticity. In this context, note the selection of decrees by Krateros of Macedon in the fourth century and the law from Paros (*ca.* 170-50 BC), which imposes penalties on those who attempt forgery of documents. See Canfora (2000) chs. VII, VIII.

issues in order to understand to what degree they speak of the *polis* economy as a rational system operating independently of other *polis* institutions.

In the law from Chios dated *ca.* 550 BC the Boule of the People was to levy fines on the newly sworn magistrates in case of bribery (Fornara 16).<sup>359</sup> In a lead plaque from Corcyra (*ca.* 500) private loans, more specifically, bottomry loans were recorded. The debts were given in money, more specifically, in drachmae but the monetary system is not specified. The uniformity of the wording of the inscription reveals the existence of a strict system of borrowing.<sup>360</sup> A later inscription from Argos dated *ca.* 460-50 BC deals with economic matters. Financial officials distributed the total sum of 63,710 drachmae to 12 political groups belonging to one tribe, the Hynathioi. This amount of money was probably income from public lands (*SEG XLI* 284).<sup>361</sup>

Inscriptions belonging to the archaic period provide evidence for the economic role of many sanctuaries. Money in the form of dedications and other religious regulations, of the *dekate* and of fines paid to the gods was accumulated in gods' treasures. Therefore from the archaic period the Greek shrines functioned as 'banks' for individuals and cities likewise. An early inscription from Elis in Olympia regulates that strangers (*xenoi*) have to pay 4 dr. to Zeus of Olympia (*Nomima* I no. 4). Also, the amount of 10 minai was to be paid to Zeus of Olympia by the magistrates in case they would not accept the decision of the people of Elis for the *patrias* (a foreigner or slave who was employed as scribe) (*Nomima* I no. 22). There are also references to sacred money (*chremata hiera*). For example, an inscription from Arcadia dated to 500-475 BC refers to 'sacred drachmae' (*Nomima* I no. 57). A very early inscription from Boeotia

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<sup>359</sup> See Oikonomides (1967) pp. 19-25.

<sup>360</sup> See Kalligas (1971) pp. 79-93, Salmon (1984) ch. X, *Nomima* II no. 73.

<sup>361</sup> See Kritzas (1987) p. 329.

refers to the *dekate* deposited with the god Apollo (*Epigrafia* I: Boeotia no.1). In an inscription from Samos dated *ca.* 580-60 BC the Perinthians devoted the *dekate* to the goddess Hera which amounted 212 staters of Samos (*Epigrafia* I: Ionia no. 8).

Citizens owed money to the gods. Private debts to a sanctuary are inscribed on a lead plaque probably from Gela in Sicily which is dated no later than 450 BC (*Nomima* II no. 77). Interest was added to the total amount of 301 T and 141 onces, owed to the goddess. The money is given according to two different monetary systems, that is, the Sicilian (in onces) and the Euboeic-Attic.

Many financial documents come from cities on the island of Crete, especially from Gortyn. The corpus of these inscriptions provides evidence for a complex of economic activities such as purchase, exchange, distribution, hypothecation and inheritance. Moreover, it provides evidence for the monetization of the *polis* economy.<sup>362</sup> An inscription from Gortyn dated to the beginning of the fifth century illustrates a series of economic practices (*Nomima* I no. 7). There is a reference to 350 staters for the victims of sacrifices. The one drachma as fine, imposed on those who did not accept the regulations, was to be used for common benefit, in particular, for the army and the people of the city. Part of money from several economic transactions was deposited in the public treasury. For example, in an early inscription from Gortyn payments were to be made to the whole city (*poli pansai*) (*Nomima* I no. 1 l. 2). Also, in case that a foreigner worker (*xenias*) would not accomplish the terms of the

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<sup>362</sup> For instance, in the earlier laws of Gortyn from the temple of Apollo Pythios, dated to the sixth century or earlier, fines were calculated on the basis of *lebes* and tripods. But from the beginning of the fifth century fines were calculated on the basis of staters, drachmae and obols. It is likely that at the earlier laws the term stater referred to the coinage of Aegina until the mid-fifth century, when Gortyn began minting. See Perlman (2002) p. 203. A very early appearance of triobol on the Aeginetan standard is attested in an inscription from Eleuthernae in Crete dated to the end of the sixth century BC (*Nomima* I no. 25).

contract, he was to pay a fine which was deposited in the public treasury (*Nomima* I no. 30). In some cases the amount of money to be paid was fixed. For instance, the fines levied on citizens who committed adultery were fixed on the criterion of their social status (*Nomina* II no. 81).

How much use of the financial documents of the Greek cities did Herodotus make? Undoubtedly, Herodotus was interested in the origin of Greek writing and its use in inscriptions (V 58-61).<sup>363</sup> Therefore it seems plausible to suppose that Herodotus read many Greek inscriptions in Athens and in other cities where he travelled. However, his account of economic issues does not fit the complexity and the variety of the economic activities taking place in the Greek cities from an early time, as emerges from inscriptions. In addition, the procedure of monetization of the Greek economy, as revealed by the archaic financial documents, is not found in his account of economic factors. Even archaic inscriptions, as those discussed above, reveal that many policies of the *polis* had economic ends, despite their integration into practices related to temples and sacred monies (see ch. 1). But Herodotus did not understand completely the economic role of these practices. Hence we can conclude that Herodotus does not argue from the evidence of the financial records of Greek cities. His understanding and his account of economics are not the product of a systematic and intentional study of financial records, which Greek states systematically published. For economic factors are kept in the periphery of his narrative and in the periphery of the objectives of his work.

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<sup>363</sup> See Benardete (1969) ch V.

Now we shall focus on the growth of the naval power of Greek cities and the economic practices required for sea warfare at the time of the Persian Wars and the historian's understanding of it.<sup>364</sup> In other words, we shall discuss the historian's understanding of the Greek economy in relation to the growth of sea-power and the building of a *polis* navy.

We have argued that Herodotus' account of Athens' sea-power reveals, first, that the historian was interested in sea-power and, second, that Athens' naval power was in a procedure of development. Moreover, this parameter defined Herodotus' description of the sea-battle of Salamis. The so-called decree of Themistocles, dated to 480 BC, gives evidence for the structure of the Athenian navy at the time of Salamis and indicates institutional developments towards the main elements of the Athenian navy at the time of Athens' naval supremacy (ML 23= Fornara 55).<sup>365</sup> There were two hundred Athenian ships; the crews of the ships were made up by Athenians and resident aliens; the generals appointed the trierarchs; Athenians who possessed land and a house in Athens and children born in wedlock were appointed as trierarchs; the generals appointed 10 *epibatai* (deck soldiers) to each ship and 4 archers; the generals assigned the petty officers; the generals were to write up the names of the crews on the notice boards along with the names of the triremes; the oarsmen were distributed in companies (*taxeis*). In the decree there is no reference to payment for naval service.<sup>366</sup> However, pay for naval service was not entirely unknown to Greek cities.

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<sup>364</sup> For a general discussion Momigliano CR 58 (1944) pp. 1-7.

<sup>365</sup> The authenticity of the decree has been disputed. It has been argued that it is not forgery because there are many traces of official and archaic language. See Morrison, Williams (1968) ch. 5. Burn (1984) pp. 364-377 argues that the decree must have been preserved in archives. He put the decree in the mid-fourth century tradition according to which numerous documents of the period of the Persian wars were alleged to have been preserved. Demosthenes (XIX 303) refers to Miltiades' and Themistocles' decrees. See Morrison, Coats (1986) pp. 108-118.

<sup>366</sup> It is probable that the crews served without payment, as part of the duty required from citizens and resident aliens in Athens. See Morrison, Coats (1986) pp. 118-120.



In the four archaic laws from Eretria (*ca.* 525-500 BC) payment for men serving in the Eretrian navy (*SEG* XLI 725 ll. 10-12) is attested. The structure of the Athenian state fleet reflected, to some degree, the democratic institutions of Athens. Thus the change of Athenian democracy into radical democracy by the time of the Peloponnesian War affected the structure of the Athenian navy and the pay of the sailors in cash was established.

An early system of organising the Athenian navy before Themistocles' legislation is to be found in *naukrariae* (*Ar. Athen. Pol.* 8.3, Androtion *FGrH* 324 f 36, Hdt V 71.2). The role of *naukraroi* is ambiguous. Much of the debate has been based on the etymology of the word. Thus it has been connected with construction and maintenance of ships and the word *naukraros* has been often translated as ship-commander (see the word ναῦς).<sup>367</sup> It has also been connected with temple administration and thus the *naukraroi* have been regarded as religious and financial officials of sanctuaries (see the word νεώς).<sup>368</sup> However, the *naukraroi* as collectors of taxation money had to allocate a sum of money for the construction and maintenance of warships.<sup>369</sup>

We argued earlier that Athens possessed some warships before Themistocles' naval programme. Furthermore, the system of *naukrariae* reflects, to some degree, the use of some funds for the construction and maintenance of ships. The Persian Wars and

<sup>367</sup> See Thomsen (1977) pp. 136-137. Gabrielsen (1985) p. 44 rejects a ship connection. For a summary of scholarship about *naukraria* see Scott (2000) p. 106.

<sup>368</sup> The *naukraroi* therefore were seen as the predecessors of the *tamiai* of classical Athens.

<sup>369</sup> See Jordan (1975) pp. 5ff., Gabrielsen (1994) ch.1, van Wees (2004) pp. 203-206. A similar role to the *naukraroi* might have had the *aeinautai* in Miletus (*Plut. Moralia* 298cd, *Quest. Gr.* 32) and in Eretria (*IG* XII 9. 923). The *aeinautai* in Miletus have been regarded as aristocrats who owned warships which could be used in the service of the city. Similarly, the *aeinautai* in Eretria owned ships which could serve certain needs of the community such as defence, war, privateering but at the same time could be used for the ends of private individuals. See Velissaropoulos (1986) pp. 21-26.

the naval programme of Themistocles gave impetus to the development of the Athenian fleet into a *polis* navy. This consequently led to the strengthening of the naval power of Athens.<sup>370</sup> By the end of the archaic period the state institutions took over the role of individuals, that is, the wealthy aristocrats. The wealth of aristocrats was used for the benefit of the state and of the citizens (e.g. liturgies). Thus the possession of ships by private individuals was replaced by possession of warships by the state, a factor making for a *polis* navy. This significant development generated from the use of the trireme, the new type warship (see below). The construction of the trireme and its costly maintenance was a reason that individuals did not acquire triremes. Also, a trireme was not to be used for trade. Thus the fleet of triremes was a state fleet. The sequence of wars between Greek cities taking place at the end of the archaic period made naval encounters more frequent and significant. For instance, in the wars between Athens and Aegina (Hdt 5.81.2, 6.87-93, Bacchylides 13 ll. 182-9) the significance of encounters at sea became clear and assisted in the gradual construction of the Athenian fleet.<sup>371</sup>

From Thucydides' account of thalassocracies in his *Archaeologia* (I 13-18), as from Herodotus, it emerges that at the time of Salamis the naval power of the Greek cities was in a process of development and expansion. Thucydides in the first paragraph says that in the archaic period 'Greece grew powerful and the acquisition of wealth was increased; tyrannies were established in most of the cities as revenues grew greater; Greece possessed navies and the wars took place on the sea'. From this passage we can assume either that tyrannies were established because of the wealth of the Greek *poleis* or that the economic policies of tyrants increased the wealth of the

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<sup>370</sup> Furthermore, 'manoeuvring the Athenian assembly into a state policy of maritime expansion, Themistocles destined Athens to a brilliant economic career'. See Sahlins (2004) p. 39.

<sup>371</sup> See Scott (2000) pp. 93-105

*poleis*. However, for the present argument it is important that Thucydides discusses the topic of Greek naval power in the context of the rising of tyrannies. Moreover, he connects sea-power with prosperity. According to Thucydides, ‘the Corinthians had first adopted something like the modern style of ship-building, and the oldest triremes had been constructed at Corinth’. Hence ‘the earliest sea-battle on record was that between the Corinthians and the Corcyreans’. Thucydides’ narrative goes further to the location of Corinth at Isthmus, where commercial activities took place from an early time. Undoubtedly, the Isthmus carrying trade (διολκός) and the artificial harbour of the Lechaem for vessels carrying cargoes made Corinth a commercial centre.<sup>372</sup> Thucydides’ argument is strong, since it relates sea-power to prosperity and to a long tradition of sea trade. Following Thucydides’ narrative, the Greco-Persian wars gave impetus to the strengthening of the naval forces of the Greek cities and, finally the Athenians achieved their supremacy at sea.

According to Herodotus, many Greek cities contributed triremes alongside *penteconters*, the old style warships. Thus it was a transitional stage in Greek warfare, when the naval warfare took over the old hoplite warfare and the naval power of the Greek cities grew bigger because of the wide use of triremes. The use of triremes was widespread during the Persian Wars. Even in the naval battle at Lade in 494 BC (VI 8-18) the Greeks of Asia lined up three hundred and fifty three triremes against six hundred Persian warships. Moreover, new tactics were developed at that time. Herodotus described the tactic of *diekplous* (breakthrough) employed by Dionysius when training the Ionians at naval warfare. The breakthrough is the fleet manoeuvre, by squadrons in line ahead, of pulling through the enemy’s ships drawn up in the

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<sup>372</sup> See Salmon (1984) ch. X, Hopper (1979) p. 17.

defensive fashion in line abreast.<sup>373</sup> This tactic depends primarily on the concept of the trireme as a ramming weapon. Herodotus' account of this tactic in sea fighting is an early instance, since breakthrough was improved by the Athenians during the Peloponnesian War (Thuc. II 83, 89).<sup>374</sup>

Moreover, from Herodotus we hear of the introduction of the new model of warship, that is, the trireme. The Egyptian king Neccho built a fleet of triremes (II 159.1). The new warships gave many victories to Neccho in sea battles. But Herodotus goes further and discusses the effect of the construction of a fleet of triremes on the economy. The employment of triremes by Neccho was part of a large-scale project (e.g., the construction of a canal) which implied a naval policy and fiscal practices. Similarly, naval policy is implied in Polycrates' building of his fleet (III 39, 44-45) and in his political plan 'to dominate on the sea' (θαλασσοκρατέειν, III 122). The Samian tyrant possessing a hundred *penteconters* and a thousand archers established his power on the sea (III 39). His action was primarily located in the old practice of piracy.<sup>375</sup> However, Polycrates' supremacy on the sea resulted in conquering new lands (see Thuc. I 13.6). The growth of his naval power enabled him to build at least forty triremes (III 44).<sup>376</sup> Also, the naval power of Polycrates required the employment of mercenaries and thus money was involved in the maintenance of his

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<sup>373</sup> Morrison, Coats p. 43.

<sup>374</sup> It has been argued that Herodotus' account of the *diekplous* tactic is an anachronism. In my view, it is an early instance of the employment of this tactic (also, at Artemision, VIII 9) alongside with the *periplous* tactic employed by the Greeks at Artemision and Salamis.

<sup>375</sup> The practice of piracy was embedded in Greek warfare even in a later time. For instance, Thucydides gives evidence that during the Peloponnesian War the belligerents frequently engaged in tactics of piracy. See MacDonald (1984) pp. 77-84. In the later stages of the Peloponnesian War, when the belligerents were in difficulty to obtain funds and supplies for the maintenance of the war, they resorted to the methods of piracy in order to obtain them. See de Souza (1999) pp. 31-36. Piracy and other forms of maritime violence as basic elements in sea-borne trade and warfare are reflected in the agreement between Oianthia and Chaleion, dated about 450 BC (Tod 34=Fornara 87). See Ormerod (1924) ch 2.

<sup>376</sup> Polycrates built a fleet of triremes only when he abandoned piracy and engaged in a naval policy. Haas (1985) p. 38 argues that Polycrates' career demonstrates the relationship between naval policy and the types of vessels employed to carry out that policy.

*straton nautikon*. The possession of a fleet led to the construction of ship-sheds (νεωσοίκους) (III 45). So a building programme taking place in Samos can be assumed (III 60). In Herodotus' account of Polycrates' sea-power it is interesting that the Lacedaemonians in their attempt to suppress the tyrant's forces engaged in a naval encounter (III 54-56). Herodotus says that the Spartan naval forces were large.<sup>377</sup> Herodotus' narrative about Polycrates gives the importance of a fleet for the political and financial empowerment of tyrants (and later of the *poleis*) and in this way it shares common elements with Thucydides' view of thalassocracies. Possessing a fleet indicates economic prosperity and, at the same time, it becomes a means for further economic development. In addition, a naval power demands money for its maintenance and stimulates building projects.

Herodotus demonstrates a good understanding of sea-power. But at the time of the Persian Wars, sea-power in the Greek cities was in a process of development. New economic policies were introduced in the structure of the *polis* economy and in Greek warfare because of the building of a *polis* fleet. Although Herodotus succeeded in understanding the growth of the *polis* sea-power and the economic practices, which it initiated, the transitional stage of Greek economy is reflected in his narrative. We can argue that he deals with finances from the perspective of the *polis* economy as it was being developed because of the growth of sea-power. However, the historian's understanding of naval power did not result in a systematic argument about economics from the perspective of the *polis* economy, as we argued earlier in this chapter.

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<sup>377</sup> It has been questioned whether the Spartan fleet against Polycrates was already a Spartan one. See Oliva (1971) Part II, 5.

## 7. Conclusions

(I) Herodotus' account of the Persian Wars does not focus on economic factors. The battles which were fought during the Persian Wars were hoplite battles and were described by Herodotus as such. Thus Herodotus' narrative emphasizes the merits required for hoplite warfare, that is, the bravery (*andreia*) of the warriors and the good formation of the army. Also, Herodotus' Persian Wars were the victory of Hellenism over the barbarians.<sup>378</sup> This Panhellenic victory came to be at the end the triumph of Greek freedom under law (νόμος) over oriental despotism. Thus Herodotus' history emphasized the heroic aspects of the Greek war against the barbarians.

(II) Herodotus understood the importance of the naval battles of Artemision and Salamis for the outcome of the Greco-Persian conflict. However, his account of the encounters on the sea does not underline the role of money in sea warfare.

(III) Herodotus was not concerned with the economics of the Persian Wars because, first, in hoplite warfare the role of money was not the most important parameter for success. Furthermore, hoplite warfare was not determined by the financial resources

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<sup>378</sup> The Persian Wars were idealised by succeeding generations, and the protagonists of the Greek victory over the Persians became a paradigm of heroic virtue which the Greeks thought as having been displayed in the past. Fourth-century Athenian oratory and especially the funeral speeches (*epitaphioi*) demonstrated the heroic and, to an extent, mythical perception of the Persian Wars by the Greeks, their politicians and their intellectuals. See e.g. Pseudo-Demosthenes *Epitaphios* 9-10: the recent events 'οὐπω μεμυθολόγηται, οὐδ' εἰς τὴν ἡρωικὴν ἐπάνηκται τάξιν' meaning that the past has been mythologized and thus it became a symbol of heroism. It was the habit of the Greeks to idealise the past either mythical or historical and other practices employed by their ancestors. For instance, in the *Iliad* (Bk. I ll. 260-274) Nestor refers to the people in the past as 'these were the strongest generation of earth-born mortals' (l. 266). Hesiod's golden age (*Works and Days* ll. 108-126) indicates an ideal past. Such references to a remote heroic past were a common place (*topos*) in rhetoric from the Homeric epics onwards in the form of mythological exempla (*paradeigmata*). Moreover, the corpus of the epigrams written for the victory of the Greeks over the Persians demonstrates a long tradition related to the memory of the Persian Wars and to the very Greek ideals of political and intellectual freedom. This tradition was very long. Many of the epigrams on the Persian Wars, ascribed mostly to Simonides, are, in fact, Hellenistic compositions, e.g. Simonides VII. For Simonides' epigrams on the Persian Wars in their historical context see Molyneux (1992) chs 7, 8.

of the *polis*. It was mainly determined by the contributions of individuals, that is, the hoplites who afforded their armour. Second, at the time of the Persian Wars sea-power was becoming more important. The maintenance of a *polis* fleet was not entirely based on money, since citizens served in the navy without payment.

(IV) Economics determined warfare and thus, to some extent, the Persian Wars. Herodotus was aware of their role in warfare and, for this reason, dealt with economic factors in the periphery of his narrative.

(V) Herodotus was interested in economic issues. Economic activities such as coinage and trade became subjects of his history. He also reveals an understanding of sophisticated fiscal practices which undoubtedly operated the monetized economy of his era.

(VI) Despite the fact that in Herodotus' history economic issues along with an understanding of even advanced financial policies are detected, it is evident that the historian dealt with economics incidentally in order to discuss other issues and to give his opinion about what was important or παράδοξον and θῶμα for him.

(VII) His approach to economics was influenced by the philosophical view of wealth and money, established by the lyric and tragic poets. Therefore he often maintained a traditional or else 'archaic' view of wealth and money. His perception of wealth and money often became abstract. Moreover, he focused on the perils of excessive wealth. So in his narrative the economic aspects of many practices were often fused in the theoretical conception of wealth.

(VIII) However, Herodotus did not entirely reproduce an aristocratic view of wealth and of the *polis* economy because his understanding of economics was affected by the economy of the Greek *polis* and the rationales of sea-power. For this reason, he was able to provide an account of economic issues.

(IX) Herodotus took as subject-matter of his history two different political constitutions, that is, the Greek *polis* and the Persian Empire. Thus his argument on finances was affected by the structure of the Persian economy. He gives economic policies taking place in the empire, more importantly, the tribute system. However, he failed to describe the Persian economy in its ramifications which the financial documents of the empire imply. For his Persian Empire mainly relied on the traditional view of the '*polychrusus*' Orient.

(X) Herodotus' history is informative about many economic policies employed by individuals and states. However, we cannot reconstruct the economy of the Greek *polis* or of the Persian Empire from his history in all its ramifications and independently from other factors. Because in Herodotus' narrative economics were 'embedded' in the narrative of other issues. But the Greek *polis* economy was not 'embedded' in other institutions as we argued in respect of Greek coinage (ch. 2) and of the *polis* economic policies related to public finances (ch. 1).



## CHAPTER FIVE

### *Thucydides on the economics of the Peloponnesian War*

#### 1. Introduction

In the previous chapter we dealt with Herodotus' approach to the economics of the Persian Wars. In this chapter we apply to Thucydides' history the same line of analysis, that is, the historian's understanding of the economics of the Peloponnesian War. Certainly there are differences between Herodotus' history of the Persian Wars and Thucydides' history of the Peloponnesian War in respect of, first, the nature of the wars and, second, of the historians' narrative techniques. This is not the topic of this thesis. However, if we ask for Thucydides' *History* the question we asked about Herodotus can we hope to understand what Thucydides added to Herodotus' understanding of the economics of war and the economic development of the Greek *polis*. In fact, we can understand what was new in Greek warfare and in the *polis* economy in the period of the Peloponnesian War and what reflects a development in the historical writing from Herodotus to Thucydides.

In this chapter, we, firstly, deal with the military undertakings taking place during the Peloponnesian War, that is, factual battles, sieges of cities, internal conflicts and invasions of countryside. We focus on the importance of economic factors for Greek warfare and on the degree to which Thucydides' narrative deals with such factors. Secondly, we consider the role of financial resources and money for the Athenian *arche* as emerges from Thucydides' narrative and from the speeches of the

protagonists of the war included in the *History*. We shall also detect changes and developments in the economics of the war. Thirdly, we argue how the Peloponnesians acquired power to confront successfully the Athenian *arche*. Thus we hope to draw conclusions as to whether we can reconstruct the economics of the Greek war and the economic practices that the cities employed to finance the war.

## 2. The role of economics and city siege

The siege of Potidaea is an important episode in the *History* (I 56-58). Athenian and Corinthian forces were involved in operations in Potidaea. Thucydides describes a market held outside the walls of Potidaea, probably to provide the armies with provisions (I 62.1).<sup>379</sup> The Athenians under Phormion besieged Potidaea (I 64-5). The siege of Potidaea ended with the surrender of the Potidaeans to the Athenians (II 70). The cost of the siege of Potidaea was 2,000 Talents (II 70.2). In fact, it was a very costly enterprise because of the large army and the long siege. Each hoplite received two drachmae per day (one for himself and one for his servant, III 17.4). Similarly, the sailors were paid the same amount of money.

After the capture, the population of Potidaea was expelled and Athenian *epoikoi* were sent there.<sup>380</sup> The episode of Potidaea is described in the span of two years war and of two books in Thucydides' history. In my view, the whole narrative of the siege of Potidaea prefigures the character of Greek warfare during the Peloponnesian War,

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<sup>379</sup> Markets held for the provisions of armies were common in Greek warfare. For example, Xenophon (*Hell.* III 4.16) describes a market at Ephesus aiming at the provisioning of the Spartan army there. 'The market was full of horses and weapons, offered for sale, and the copper-workers, carpenters, smiths, leather-cutters, and painters were all engaged in making martial weapons ...the city was really a workshop of war'.

<sup>380</sup> Athenian *epoikoi* sent to Potidaea are attested in an inscription which contains dedications made by them (ML 66= Fornara 129). Diodorus (XII 46.7) gives the number of the colonists as one thousand.

which demanded money and fleet. The expansion of siege warfare as actual warfare and the improvement of siege techniques (e.g. construction of wooden mounds and use of battering rams) led to certain changes.<sup>381</sup> For instance, the building of a wall around a city under siege inaugurated a new direction in Greek warfare, that is, the expansion of fortifications.<sup>382</sup>

The siege of Plataea is vividly described by Thucydides. The Thebans tried unsuccessfully to siege Plataea (II 2-6, Aen. Tact. *On the defence of fortified positions* II 3). In the encounter between the Thebans and the Plataeans the following seem to be worth noting: Firstly, many of the inhabitants were in the countryside at the time of the Theban invasion of Plataea. Secondly, the Plataeans committed atrocities against the Theban captives. Thirdly, the Athenians established a garrison in Plataea. The Plataean incident is prophetic for the character of Greek warfare, since the war affected the relation between city and countryside and initiated extreme brutality.

After the Thebans' unsuccessful invasion of Plataea, the Lacedaemonians invaded Plataea (II 71-78). Archidamus in his exchange with the Plataeans proposed that they should surrender their city to the Peloponnesians and settle in another land for the duration of the war. The Peloponnesians were to cultivate the land and to give to the Plataeans part of the income to live on (II 72.3). Archidamus' proposal was both political and economic. First, it was an issue of war politics. This practice was employed by the Greeks during the Peloponnesian War. The whole population of a city was expelled and new *epoikoi* were settled. Thucydides, in his chapter on historical method, noted that many cities were inhabited by different people

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<sup>381</sup> The siege of a city was predominant in Greek mythology e.g. the siege of Troy in Homer or the siege of Thebes.

<sup>382</sup> See Kern (1999) ch.V.

(*oiketores*) after their capture (I 23.2).<sup>383</sup> Second, it was economic because leasing of public land was an established economic practice which increased *polis* public finances.<sup>384</sup> Rent was to be paid in liquid money to the renter and therefore land as capital can generate income in liquid money.

The Peloponnesians aimed at the immediate capture of the city because they wanted to avoid high expenses (*aneu dapanes*). Siege warfare nevertheless demanded time and money and for this reason the Peloponnesians' first attempt to besiege Plataea failed. Thucydides resumed the narrative of the siege of Plataea in Book III (20-24). The Plataeans surrendered to the Lacedaemonians because of lack of provisions. Atrocities were committed by the Lacedaemonians against the defeated Plataeans. Many men were put to death. The women were enslaved. The city was entirely destroyed. A temple of Hera was built and a hostel nearby. The Plataean territory was turned into public land and was leased out for a period of ten years.

Similar practices were employed when the Athenians under Cleon's leadership captured Torone in the Chalcidic peninsula (V 2-3). The women and the children were sold as slaves while the men were sent to Athens. The siege of a *polis* affected the whole population of a city. Even when atrocities did not take place, the enslavement

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<sup>383</sup> Thucydides earlier in the book (II 2.27 and Plut. *Per.* XXXIV 1) noted that the Athenians expelled the Aeginetans from their land and sent new settlers there (*epoikoi*). The Lacedaemonians gave the Aeginetans a new land to farm in Thyrea. See Figueira (1991) ch.1. He takes the term *epoikos* as the official Athenian term for a settler dispatched subsequently or sent as reinforcement. The term *epoikos* has been much discussed. The authors of *ATL* (iii 285) think that there is no distinction between *epoikoi* and *apoikoi*. Ehrenberg (1952) believes that the *epoikoi* sent to Potidaea were 'additional settlers', sent out to supplement the city's depleted population. See ML p. 181. In the decree for the foundation of the Athenian colony at Brea there is a reference to *apoikoi* (ll. 4-5) and also to *epoikoi* (ll. 29-30) (ML 49=Fornara 100).

<sup>384</sup> The Athenians in Mytilene, after the suppression of its revolt (Thuc. III 50.2) divided the whole island into 3,000 allotments (300 dedicated to the gods) and they let out the rest to cleruchs. The Lesbians had to pay the Athenians a yearly rent of two minae for each allotment and cultivated the land themselves.

of people was a common practice (e.g. V 32: the enslavement of women and children after the capture of Skione by the Athenians). Slaves were sold for money. There existed fixed prices for slaves.<sup>385</sup> For example the Athenians in Sicily received the amount of one hundred and twenty Talents, when they sold the enslaved population of Hykkara (VI 62.4). Thus the market of slaves after the capture of a city was a financial resource for maintaining the war and undertaking costly sieges.

### 3. The role of economics and internal conflict<sup>386</sup>

The internal conflict (*stasis*) in Corcyra received a long narrative (III 70-85, IV 47-8). The Corcyreans were Athens' allies but some men attempted an alliance with Corinth. 800 Talents were given to the Corinthians by the Corcyrean *proxenoi* as a guarantee.<sup>387</sup> Peithias, the leader of the democratic party and proxenos of the Athenians, fined five of his wealthiest opponents with one stater each, accusing them

<sup>385</sup> For prices of slaves see Pritchett (1956) pp. 178-317. The prices of slaves vary from the lowest price 50 dr. to 3,000 dr., the highest for a courtesan. The Attic Stelai provide material for slave prices. For instance, the prices of the 16 slaves belonging to the metic Cephisodoros (he owned the largest number of slaves, probably because the occupations of metics demanded a large number of slaves) varied from 72 dr. to 240 dr.

<sup>386</sup> In the view of modern historians the Peloponnesian War as a whole was a civil strife between the Greeks. In Greek historiography we find statements that internal conflicts were disastrous, e.g., Herodotus referring to an elegy says that internal strife (*stasis emphylos*) is greater calamity than war against enemies (VIII 3.1). However, the Peloponnesian War was not perceived as an '*emphylos*' conflict by its historians and by Greek intellectuals throughout antiquity. Thucydides as the historian of the war claims (I 23) that it was the greatest of the Greek wars so far, because it was a long term conflict (V 26) and it brought much suffering to Greece. He does not say that the Peloponnesian War was such because it was a conflict between Greek cities. He adds that the war was very cruel because internal conflicts (*staseis*) took place in many Greek cities during the Peloponnesian War. See Price (2001) ch. 7. In writers after Thucydides, there is no hint of contempt for the Peloponnesian War as an internal conflict between Greek cities. This is asserted by the genre of funeral oration (*epitaphioi*), which evolved in Athens in the fourth century and involved a re-writing of Athenian history, becoming a means for the education (*paideia*) of the people in democratic Athens. Thus all the events of the past were presented as a paradigm for the *arete* of the Athenians. With the funeral orations the Athenians were trying to transform certain events belonging to a common history of all the Greeks into *topoi* of their own history. See Loraux (1986) ch. III. In this framework, the victories of the Athenians during the Peloponnesian War were transformed into a glorious example of their merits, e.g. Lysias *Epitaphios* 52-3 presents the invasion of the Megarid by the Athenians as an excellent achievement (*kalliston ergon*) which brought glory (*kalliste doxa*).

<sup>387</sup> We can not speculate whether the money came from the state treasury or whether it was individuals' contributions. But the figure of 800 T seems high taking into account, for instance, that the annual income of Athens at the heyday of its *arche* may have been 1,000 T (Xen. *Anab.* 7.1.27).

of cutting poles for vines from the sacred land (*temene*) of Zeus and Alcinus. Religious matters were always involved with the activities of individuals and the politics of cities. The fine was too large to be paid and so the accused oligarchs killed Peithias and other members of the Assembly. This action initiated a series of violent acts between democrats and oligarchs. The democrats won over the slaves with the promise of emancipation while 800 mercenaries came to help the oligarchs. Thucydides informs us, unusually for his narrative, that even women assisted the democrats in the battle against the oligarchs. Oligarchs and democrats invited the Peloponnesians and the Athenians respectively to intervene in their conflict. In a naval battle between the Peloponnesians and the Athenians, the Peloponnesians were victorious. The citizens of Corcyra committed every atrocity against their fellow-citizens. Thucydides reports that the killing between citizens was motivated even by individuals' debts. Such an attitude violated civic practice concerning debts. For example, in an inscribed lead plaque from Corcyra a strict system of debts contracts appears.<sup>388</sup>

Following the *stasis* in Corcyra, Thucydides offers his philosophical view of war and human nature (IV 82-4).<sup>389</sup> The historian unfolds his pessimistic view of human nature which makes people capable for wrongdoing. However, the unsatisfied needs of people during war lead them to commit acts of cruelty and thus war is a 'violent teacher' (*biaios didaskalos*). The strongest ties between people are to be found only between political followers which leads to the resolution of the social relationships. The worst people (*fauloterōi*) (probably in terms of moral values) dominate the

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<sup>388</sup> Kalligas (1971) pp. 79-93. The names of the lender and the borrower and the amount of the loan are recorded. There are two witnesses of the act. There is no mention either of interest or the time of repayment of the money.

<sup>389</sup> Thucydides' description of *stasis* has been considered as a rare piece of explicit political analysis. See Hussey (1985) pp. 118-138.

political scene of the Greek *poleis*. In such a situation people prevent the functioning of the natural law which is the basis for human society.<sup>390</sup> Because of lack of sense of justice, people harm their fellow-citizens and rob them of their property. Thus a crisis in civic life takes place in periods of internal strife. In Thucydides' view of *stasis* and its consequences in the edifice of the *polis*, economic factors are almost absent. We do not hear from Thucydides how the crisis of the *polis* institutions, caused by internal conflict, affects its economy. His account emphasizes the moral aspects of civic conflict.<sup>391</sup>

Conflict between democrats and oligarchs in a city like that in Corcyra took place many times in the course of the Peloponnesian War. The war between Athens and Sparta and their allies became a strife between two different political regimes, two opposing *politeiai*. For example, the internal strife in Megara and the involvement of the Athenians and the Lacedaemonians alike resulted in the imposition of oligarchy on the city (IV 66-74).

#### **4. The invasions of countryside and its economic consequences**

In the first year of the war the two sides invaded and destroyed the land of their enemy. The Peloponnesians invaded Attica at the time of harvest under the leadership of Archidamus (I 19-23, Plut. *Per.* XXXIII 3-4). The Athenians carried out similar activities. They engaged in damaging the shores of Peloponnesus (II 23-30).

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<sup>390</sup> At this point, Thucydides echoes the sophists' perception of natural law. For example, Antiphon the Sophist (*On Truth* 87A, 44A DK) distinguishes between natural and human law.

<sup>391</sup> There is an echo of Thucydides' philosophical interpretation of *stasis* in Xenophon's account of the regime of the Thirty. In Cleocritus' words the civic war is 'shameful and intolerable, unholy and hated by both gods and men' (*Hell.* IV 22).

At the beginning of the war the Athenians undertook the invasion of the Megarid under Pericles' leadership with large forces, prompting the historian's comment that 'this was the largest army that Athens gathered because it was at the peak of its power and yet not devastated by the disease' (II 31, Plut. *Per.* XXIV 2). During the war the Athenians invaded the Megarid twice a year (e.g. IV 66).

Again, the Peloponnesians under the command of Archidamus invaded Attica in the summer of the second year of the war (II 47, Androtion *FGrH* fr. 39). They destroyed the land around Laureion, where the silver mines were (II 55). The Athenians invaded Peloponnesus (II 56). The Athenians destroyed certain off shore areas in Peloponnesus among them Prasiai (a small city, *polisma*) which they captured and ravaged (probably this place suffered heavily in the hands of the Athenian invaders and thus it received Aristophanes' attention (*Peace* ll. 242-3)). Thus the first hostilities between the Athenians and the Peloponnesians were concentrated on land ravaging. The Peloponnesian invasion of Attica became a regular event and took place annually at the time of harvest (e.g. III 1).

From Thucydides' account of the first Peloponnesian invasions of Attica it emerges that the whole undertaking aimed at harming the agriculture of Attica. This was because the destruction of agricultural production was an effective practice in ancient Greek warfare.<sup>392</sup> We discuss later how much the Peloponnesian invasions affected agriculture in Attica. At this point, we can point out that the devastation of the crops in Attica by the enemy might have caused a gradual change in the attitude of the

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<sup>392</sup> Although Herodotus did not refer to invasions of countryside during the Persian Wars, in his history we find instances of ravaging a hostile territory. For example, Alyattes devastated agriculture in Miletus by burning the crops (I 19). After the naval battle of Artemision the Greek leaders at the initiative of Themistocles decided to destroy the livestock of the Euboeans (VIII 19).



Athenians to the predominance of agriculture as the basis for their subsistence and their revenues. Such a change in their attitude can be explained because the Athenians overcame the damages that the Peloponnesian invasions of Attica caused to agricultural production for a long time, and also because the Athenian *arche* provided the Athenians with new sources of wealth (as Pericles' speech asserts, II 13).

Thucydides' account of the fortification of Deceleia in Attica provides evidence for the consequences of the invasions of countryside. The Lacedaemonians followed the advice of Alcibiades (VI 91.6) and fortified Deceleia in Attica, aiming at the ravaging of Attica.<sup>393</sup> Thucydides, in his excursus on the *epiteichismos* of Deceleia, gives a full account of its effects on the Athenian economy and society and, in general, on the war (VII 27-28). According to Thucydides, it was a real blow to the economy and the social edifice of Athens. The historian reported that the Athenians abandoned their land, twenty thousand slaves deserted and agriculture was adversely affected. The cavalry had suffered damage. The importation of supplies became difficult and costly. Finally, the whole city was turned into a fort since the Athenians had to maintain garrisons continually.

The fortification of Deceleia was considered by the historian to be critical for Athens because it provided a base for a more systematic programme of damage to the property of the Athenians. Thus a new method of warfare was inaugurated, which aimed at causing systematic and sustained damage to the enemy's land. The new

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<sup>393</sup> Alcibiades argued for the reduction in the mining output and the loss of revenues from the law courts because of the fortification of Deceleia (VI 91.7, also Diod. XIII 9.2). According to the *Old Oligarch* (I 16-8), the trials of the allies, which were held in Athens, were a source of a revenue for Athens. In the Athenian decree which imposes regulations on Miletus we find that trials of the allies are to take place in Athens and the money derived from the trials are to be deposited at Athens (Fornara 94 ll. 29-33).

tactic, different from the short-term annual ravaging, demanded new strategies for its containment.<sup>394</sup> Therefore Thucydides' narrative emphasizes the new strategy, which the fortification of Deceleia initiated. For this reason, Thucydides describes in detail the impact on Athens' economic resources and social institutions.

How did the fortification of Deceleia affect the economy of Athens? The first assumption is that agriculture in Attica was affected by the fortification of Deceleia and also by the Peloponnesian ravages of Attica.<sup>395</sup> In my view, the damages caused to Attic agriculture were not that severe but agriculture was able to revive during the war and immediately after the war for the following reasons. First, because of the structure of agriculture in Attica made up as it was of small holdings and, second, because of the level of production in Attica. The countryside in Attica was divided into small holdings which implied many landowners.<sup>396</sup> It was only Athenian citizens who owned land and the family's land-holdings were inherited, so remaining in the same family for long periods.<sup>397</sup> Farming, according to the mentality of the Greeks, was an occupation which conformed to the aristocratic ideal of the classical era.<sup>398</sup> The basis of wealth for the Athenian citizens was land because of the superiority of

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<sup>394</sup> See Hanson (1998) pp. 151-153.

<sup>395</sup> See Hanson (1992), Ober (1985). Hanson's main conclusion is that the damage to Attic farming has been overestimated. Ober, taking into consideration Pericles' defensive policy and its eventually failure, concludes that Attic farming was badly damaged during the Deceleian war (ch. 4). Foxhall (1993) draws attention to the social disunity brought about by the damage to crops.

<sup>396</sup> [Arist] *Oec.* 1.6.2, 6. The *Attic Stelai* and the *Poletai Lists* confirm the fragmentation of land property. See Snodgrass (1990) pp. 113-136, Osborne (1987) ch. 2, id (1992) ch. 3. The case of Phainippus' *eschatía* (Dem. 42), the largest piece of property known from Athens, seems to be an exceptional one. It is estimated as at least 100-150 hectares (42.5). See de Ste Croix (1966) pp. 109-114, Osborne (1992) p. 123. For a full account of the distributions of Attic landholdings (with figures) Foxhall (1992) pp. 155-159. According to Andreyev (1974) p. 8 landed property of 2-3 talents can without doubt be considered a sign of rich owner. Larger landed property was, under the circumstances existing in Attica, something of a rarity.

<sup>397</sup> E.g. Dem. 55.3, [Dem.] 47.53. The scatter of the plots in Attica can be explained as result of workings of inheritance law. See Isager and Skydsgaard (1992) pp. 126-128.

<sup>398</sup> Xen. *Oec.* 4-5. There is a distinction between farming and the so-called *banausic* occupations which enjoyed very low esteem among the Greeks (4.1-3). Also, Arist. *Pol.* 1.1256a on the priority of husbandry.

the occupation of farming and the importance of the agricultural production for a city-state which sought self-sufficiency. Also, many farmers in Attica cultivated a wide variety of crops due to the agricultural diversity of the land.<sup>399</sup> The production of wheat and barley was poor whereas olive trees and fruit-bearing trees such as fig-trees were abundant.<sup>400</sup> Trees such as olive-trees are less vulnerable to damages.<sup>401</sup> Their produce was collected in mid-October by which time hostilities had usually stopped. Thus we can conclude that the fortification of Deceleia did not destroy the agricultural production anymore than did the ravages of Attica during the Peloponnesian War.

However, agriculture was affected to some degree. The records of the *aparchai* at Eleusis provide evidence for this. For example, in the inscription *IG I<sup>3</sup> 387* the sum recorded as *aparche* located on the Acropolis remained the same during the entire year 408/7 BC. The lack of any newly received *aparche* was probably related to the presence of the Spartan garrison at Deceleia. Similarly, in the *IG II<sup>2</sup> 1672* the sale of the *aparche* produced 3,510 dr. and 5 ½ obols. But the cost of sacrificial animals and other expenditure was 3,235 dr. and ½ obol. Hence a surplus of 275 dr. 5 obols was left. The small surplus was probably related to the effects of the occupation of Deceleia on agricultural production (see chapter one).

The second assumption is that the fortification of Deceleia affected the mining output. This is related to the large number of slaves who deserted to Sparta after the

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<sup>399</sup> Rackham (1990) pp. 106-109.

<sup>400</sup> On the importance of olive-trees: Dem. 43, reference to the law for the removal of olive trees, Plut. *Sol.* 24: only the export of olives was allowed.

<sup>401</sup> Lys. 7 contains evidence for the destruction of olive-trees. Nevertheless, Dem. 57.45, Isocr. 5.43-4, Soph. *Oed. Tyr.* 694ff., Xen. *Hell.* 2.4.1, 4, 26 show that immediately after the war the Athenians were farming and their farms were intact and productive.

occupation of Deceleia.<sup>402</sup> It is plausible to say that before the war a considerable number of slaves worked in the mines of Laureion, one of the most valuable financial resources for Athens, where the working conditions were particularly hard.<sup>403</sup> The mining industry was inactive in the years after the Deceleian War. Callistratus' financial programme aimed at the re-organisation of the mines in Laureion (Ar. *Ath. Pol.* 47.2).<sup>404</sup> Therefore the Peloponnesian War and, in particular, the fortification of Deceleia affected the mining industry with the consequent desertion of slaves whose role was significant in mining activities. The interruption of mining activities at Laureion affected Athens' coinage since the provenance of the silver for the fifth century Athenian owls was from the mines of Laureion. The occupation of Deceleia affected the public finances of the city. Thus we can conclude that the occupation of a place in a hostile territory served economic ends, that is, reduction in the financial resources of a city.

The desertion of the slaves and the inactivity of the mines in Laureion affected the social structure of Athens. First, reduction in the number of slaves in Athens resulted in the reduction of the work force. Second, since many slaves were not any more employed in the mining industry, they may have been employed in other occupations.

Thus by the end of the fifth century and in the fourth century slaves were involved in

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<sup>402</sup> The numbers given by Thucydides raise certain questions. First, what was the percentage of slaves in relation to the total population of Attica. Second, were the slaves who ran away after the occupation of Deceleia agricultural slaves or slaves engaged in mining? Most of them might have been engaged in mining. Undoubtedly, the figure given by Thucydides is large and it can be explained by the principles of rhetoric found in Thucydides' narrative.

<sup>403</sup> Archaeological evidence of manufactured goods points to the heavy exploitation of the mines in classical times, concentrating on the production of silver (Jones (1984) pp. 79-81, 65) An extensive mining network has been discovered, with a total of 2,000 shafts. See Conophagos (1980). A large workforce estimated from 11,000 upwards was engaged in mining. See Rihl (2001) pp. 115-142. Slaves were engaged in mining. Nicias, the fifth century general, and his son made money from hiring out their slaves to work in the mines (Plut. *Nic.* 4.2, Xen. *Poroi* 4.15.4). See Davies (1971).

<sup>404</sup> The earliest epigraphic evidence for mining leasing belongs to 367/6 BC but refers back at least to 374/3 BC (Crosby (1941). Xenophon's argument in the *Poroi* confirms that mines were inactive for a long period of time.

commercial activities, in banking, in managing workshops and other similar activities (see Dem. 36, 45). Slaves who were engaged in such activities succeeded in enrolling as metics and some of them were granted citizenship. So there was social mobility in post-war Athens, particularly among the lowest strata of Athenian society. The effects of the fortification of Deceleia prefigure changes in Athenian society after the Peloponnesian War.

If, according to the above discussion, the Peloponnesian invasions of Attica and the occupation of Deceleia did not harm the agriculture of Attica very seriously, we cannot say that ravaging countryside was not an effective practice at wartime. For instance, we hear from Thucydides that during the Corcyrean *stasis* some of the oligarchs built a fortification on the mount Ithome and from there they ravaged the countryside and thus famine spread through the city (III 70-85). Undoubtedly, by countryside ravaging the agricultural production was affected and consequently the economy of a city. Cities with agriculture based on cultivation of cereals might have been seriously harmed by invasions of countryside. Communities dependent, to a great degree, on agriculture were to face famine because of the devastation of agriculture. However, most of the cities in Greece proper had a small production of grain and their agriculture was organised on the pattern of the agriculture in Attica as described above. Also, most of them had a substantial trade and thus many goods were imported through the sea-routes. Thus the effects of hostile invasion of countryside were not always very severe. In conclusion, the pattern of agriculture of the *polis* and the fact that many cities imported great quantities of grain explain why devastation of agriculture during war did not dramatically affect the economy of the Greek cities at war. Moreover, many cities, which operated a substantial sea trade,

were able to overcome damages in agricultural production caused by ravaging. Athens, in particular, at the time of its *arche*, relied for its prosperity on its imperial financial resources than on its meagre agricultural production. However, the partial effectiveness of this practice did not deprive it of its economic objectives.<sup>405</sup>

The economic objectives of the practice of the invasion of countryside and its effectiveness on the destruction of the economy of a *polis* were in full operation when a *polis* was under siege or else when deprived of access to financial resources brought by sea-borne trade. The Spartan siege of Athens in the end of the war is such an example and justifies the effects of the occupation of Deceleia in the perspective of time. According to Xenophon, when the Athenians were under Spartan siege, the situation was desperate for them because they were deprived of their allies, of their fleet and of food supplies. Xenophon's narrative stresses the lack of provisions and the danger of starvation that the Athenians faced (*Hell.* II 2. 11, 16), since the city was overpopulated.<sup>406</sup> Many Athenians died from famine (2.22). This sentence recapitulates the outcome of Pericles' policy and of the Spartan occupation of Deceleia. The final episode of the Peloponnesian War in Xenophon's history arbitrates Thucydides' account of the Periclean strategy and of the occupation of Deceleia. Thucydides' judgement of Pericles' policy of abandoning the countryside and of the gathering of the Attica's population in the city was approving because it had been seen in the light of Athens' naval superiority on the eve of the war.<sup>407</sup> Possessing an outstanding fleet, Athens was capable of winning the war at sea and of safeguarding provisions brought to the city by sea-borne trade. Pericles' policy proved

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<sup>405</sup> See Thorne (2001) pp. 225-253.

<sup>406</sup> The capture of Athens by starvation was always potential because of the unavoidable dependence of the city on sea-borne grain trade. See e.g. Xen. *Hell.* V.4.60-1: in 376 BC the Spartan allies stated their policy towards such an objective.

<sup>407</sup> See Ober (1985) pp. 171-188.

to be wrong at the moment when Athens lost its fleet. The occupation of Deceleia denied the Athenians direct access to the countryside and to agricultural production. The consequences of the Periclean strategy and the objectives of the Spartan strategy to destroy the Attic countryside were fulfilled when Athens was under siege.

### **5. The major battles of the Peloponnesian War and Thucydides' account of their economic aspects**

Dealing with Thucydides' account of the major battles in the war we ask to what extent the belligerents were concerned with their provisions and to what extent the outcome of the battles relied on financial resources, according to Thucydides. Also, did military success rely on military tactics, martial qualities and on certain changes in warfare, according to the historian's account?

By completing the reading of the *History*, we are left with the impression that the Greek armies relied on money, because the eighth book of Thucydides left the Greek belligerents relying heavily on money and, in particular, on Persian money. In this book alone the historian constantly repeats the concern of the soldiers with their pay. Also, the ability of the Greek armies to secure their provisions and wages determined their military performance. Simultaneously, this factor decided the diplomacy of the Greek cities with Persia.

Why did Thucydides repeat so insistently the importance of provisions (*trophe*) and pay (*misthos*) for the Greek fighting in Ionia? (e.g. VIII 29, 36.1, 43.4, 44.1, 45.2, 48.2-3, 53.2, 58.5-6, 78, 80.1-2, 81.3, 83.3, 84.2-3, 87.2). A first hypothesis is that

such a repetition is related to the structure of the work. The last book of the *History* is incomplete and, undoubtedly, lacks the quality of the previous narrative. Thus the repetition can be explained as the result of the incomplete character of Thucydides' work.

On a second hypothesis, Thucydides' repetitive emphasis on money is possibly related to the fact that the war was transferred far away from the mainland and was fought mainly at sea, in the area of the Hellespont (VIII 104, 106). Therefore the importance of money to maintain a naval war, which was vigorously introduced in the Sicilian books, is reinforced in the narrative of the Ionian War. Also, since the whole Greek world from the West to the East was now involved in the war, large numbers of mercenaries were employed and thus their pay was important for their services.

On a third hypothesis, Thucydides' concern with *trophe* and *misthos* in the last book reflects gradual changes in Greek warfare in the course of the war which made provisions and money vital for any military undertaking. Also, the long-term war affected seriously the public finance of the *poleis* and thus the money of the treasuries of the *poleis* was not enough for the maintenance of an army and a fleet, making, in this way, necessary the attainment of other financial resources, that is, mainly Persian money.

However, did Thucydides' narrative emphasise these parameters in all military undertakings taking place during the war? The answer is no. For in Thucydides' account of major battles in the war other factors than provisions and money are underlined.



Let us give some examples. In book IV (3-5, 8-14) the events at Pylos are described (and Diod. XII 61-3). The Athenians fortified Pylos in Peloponnesus. The Lacedaemonians realised the great danger from the fortification of Pylos and thus attempted the capture of the fort. The Lacedaemonians were defeated by the Athenians while four hundred and twenty Spartan hoplites and their helots were blockaded on the island of Sphacteria. According to Thucydides, the Lacedaemonians undertook an encounter on the sea, where the Athenians were masters, while the Athenians were victorious on a land encounter, where the Lacedaemonians were traditionally invincible (also Diod. XII 62.7). The reverse of the martial qualities of the Athenians and the Lacedaemonians is an indicator of the changes in warfare tactics of the Lacedaemonians because of the demands of the warfare at sea.

The Athenian forces, recruited from the allies of Athens under Cleon's leadership, landed on Sphacteria. The role of the light-armed soldiers proved decisive against the Spartan hoplites because of the rough terrain of the island. Thucydides compared the Lacedaemonians on Sphacteria with those at Thermopylae. The language used by the historian reveals the greatness of the event. The Spartan hoplites surrendered to the Athenians. The defeat of the Lacedaemonians on Sphacteria came as surprise to all the Greeks. The ideal of the Spartan hoplite, who fights to death, was proved wrong by Pylos.<sup>408</sup> This is a clear indication that the hoplite warfare retreated from the landscape of Greek warfare in favour of light-armed army and skilled sailors. Many helots deserted and thus Spartan fear of helot-revolt was increased. In Thucydides' account of Pylos war tactics are emphasized.<sup>409</sup>

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<sup>408</sup> Xenophon (*Lac. Pol.* IX 1-6) says that the Spartans preferred 'an honourable death to a disgraceful life' because such dishonour was laid on the coward, who preferred death to a life so dishonoured.

<sup>409</sup> However, the importance of supplies and money are not entirely absent from Thucydides' narrative. The Athenians at Pylos suffered from lack of supplies while the hoplites on Sphacteria were in danger

The conflict of the Athenians with the Boeotians was decisive for the war (IV 76-7, 89-101). Men from Boeotia came into contact with the Athenian general Hippocrates because they wanted to change the regime of some Boeotian cities to democracy. Hippocrates recruited Athenian citizens, metics and foreigners who resided in Athens (*pandemei*) for the operation in Boeotia. The Athenians fortified Delium. The Boeotian and the Athenian army fought a hoplite battle. Although it was a hoplite battle, Thucydides notes that the Athenians at that time and during the entire war lacked light-armed soldiers. The Boeotians captured Delium. The operation at Delium was a disaster for the Athenians. Again, Thucydides' narrative underlines factors as the size of an army and the role of light-armed soldiers.

The battle of Mantinea received a long narrative in the *History*. Before the battle, the Lacedaemonians marched against Argos (V 60.1). Their army, in Thucydides' words, was the most brilliant Greek army ever gathered (V 60.3).<sup>410</sup> However, this magnificent army did not join battle. Agis, the Spartan king, was considered to be responsible for the inactivity of the army and was fined one hundred thousand

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of dying from starvation. Supplies found their way to the island because the Lacedaemonians promised a good deal of money (*argyron*) and freedom to the helots who would provide the men on the island with provisions.

<sup>410</sup> The Spartan army at Mantinea provides evidence for the demographic history of Sparta. A sharp decline in numbers of Spartiates occurred in the period from the battle of Plataea to the battle of Mantinea. At Plataea the Spartiates numbered 5,000 (Hdt IX 10). In Herodotus (VII 234.2) we find 8,000 Spartiates at the time of Thermopylae. Thucydides gives 2,500 Spartiates at Mantinea (V 68). In 371 BC the Spartan army consisted of 1,000 Spartiates (Xen. *Hell.* IV 15). Aristotle (*Polit.* 1270a 31), referring to Spartan constitution, notes that 'although the country is capable of supporting 1,500 cavalry and 30,000 hoplites, they numbered not even 1,000'. Sparta enjoyed a steady growth in manpower in the archaic period and during the Pentekontaetia. The earthquake and the helot revolt had demographic effects. The decline in Spartan population was related to the system of land tenure and inheritance (Ar. *Polit.* 1270a). From the second half of the fifth century to the fourth century Sparta suffered from *oliganthropia* (Ar. *Polit.* 1270a 34, Xen. *Lac. Polit.* 1.1), which affected the institutions of the city, that is, the social classes and the distribution of property and income among classes. Aristotle (*Polit.* 1270b) gives the measures undertaken by the Spartans to face decline in population, that is, 'a law releases the man who has been father of three sons from military service, and exempt the father of four from all taxes'. Such measures altered the very structure of Spartan society, since military service was the main occupation of the Spartiates. See Cawkwell (1983) pp. 385-400, Figueira (1986) pp. 165-213.

drachmas. Moreover, his failure affected the Spartan constitution since, for the first time, ten Spartans (*gnesioi*) were chosen to be the king's consultants. Finally, the Lacedaemonians encountered the Argives at Mantinea (V 64-74). Thucydides describes the structure of the Spartan army and the traditional warlike merits of the Spartans, which were maintained throughout the war, despite the changes demanded by the new warfare.<sup>411</sup> The Spartans acted quickly (*boetheia oxeia* against the usual *bradeia*). Helots and the so-called *neodamodeis* (those who were entitled Spartan citizenship only recently) accompanied them.<sup>412</sup> The historian, despite his scepticism about the total number of the Spartan warriors because of the secrecy of the Spartan *politeia*, gave specific numerals (Thucydides' comments on the exaggeration of numbers by the ancient Greeks is a valuable critique of the use of numbers in ancient sources). According to Thucydides, six hundred Skirites, the picked Spartan soldiers, took part in the battle. Similarly, picked soldiers joined the Argive army.

The battle of Mantinea was a hoplite battle. A change, however, in the traditional formation of the hoplites army was attempted by the Lacedaemonians. While the hoplite army was expanding towards the right side, Agis' hoplites moved towards the

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<sup>411</sup> Thucydides' account of the battle of Mantinea is informative about the structure of the Spartan army. The army consisted of seven companies (*lochoi*). Each *lochos* consisted of four *pentekosties* and each of them was divided into four *enomoties*. The length of the formation was four hundred forty-eight men (thus the historian left his reader to calculate a force of 4,184 men). The commands were given by the king to the *polemarchs* and then to *lochagoi*, to *pentecontarchoi*, to *enomatachoi* and, finally to *enomotia* (Xen. *Lac. Pol.* XI 4). War songs and the music of flutes were elements of the military tactics of the Spartans (Xen. *Lac. Pol.* XIII 7-8, Plut. *Lyc.* XXI 3-4). This recalls Tyrtaeus' poetry. Tyrtaeus with his war songs encouraged the Spartans and exhorted them to fight fearlessly.

<sup>412</sup> The participation of helots and *neodamodeis* in the ranks of Spartan hoplites was increased in the last years of the Peloponnesian War (see Xen. *Hellenica*, ch. 6). Brasidas first recruited *neodamodeis* (the 'Brasidioti') for his operations in the North. The decline in the population of Sparta, changes in the contribution of land and wealth among the Spartans and Sparta's commitment in imperialistic policies led to social mobility. Thus two classes emerged, that is, the *neodamodeis* and the *hypomeiones* ('Inferiors'), who were former Spartan citizens who lost their privileges (because of failure to contribute to the *syssition* or cowardice in battle). See Oliva (1971) pp. 177-178, Cartledge (1987) p. 170, Hamilton (1991) p. 70. So different classes formed the army of the Spartans. The so-called *mothakes*, that is, the sons of Spartan fathers and helot mothers, who possibly came through the *agoge*, probably joined the Spartan army.

left. In fact, this innovation in hoplites tactic was not effective. But such an innovation had been undertaken by the Spartans, the hoplites warriors *par excellence*. The Spartans defeated the Argives. What gave them the victory was not the tactics employed in the battle but their bravery displayed on the battlefield. In this authorial statement, we can trace the ancient preconception of the Dorians' military superiority (e.g. Pindar *Pyth.* I, 118ff., Hdt I 56).

## **6. The Sicilian expedition and the role of economics**

The sixth and seventh books of Thucydides' *History* are devoted to the Sicilian expedition. In my view, financial factors were vitally incorporated in the narrative of the Sicilian expedition and the historian's programmatic claims about the vital role of finances for the Peloponnesian War were elaborated more systematically in these books than anywhere else in his work. The following discussion focuses on the economic aspects of the Sicilian expedition.

The first Athenian expedition to Sicily took place in the fifth year of the war (III 86, 88, 90, 103, IV 58-65). The Athenians sailed there in order to intervene in the conflict between Syracuse and Leontinoi.<sup>413</sup> Furthermore, the Athenians wanted to prevent the importation of grain to Peloponnesus from Sicily. The first Athenian expedition to Sicily was naval and thus the Syracusans, faced with the Athenian threat on the sea, began to strengthen their naval power.

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<sup>413</sup> Conflicts between cities on the island were frequent because the population of the island consisted of both Greeks and barbarians, e.g. in an inscription from the fifth century a victory of Selinous is commemorated, (ML 38=Fornara 91). In another inscription dated after 440 BC a victory of Taras over Thurii is commemorated (ML 57=Fornara 112). Thucydides allowed in his narrative a long digression on the population and the colonisation of the island (VI 2-5, also Strabo VI). Euboeans from Chalcis, Megarians, Corinthians, Rhodians, Cretans and Samians were the *oikists* of the Greek cities on the island. Thus a dividing line between Dorians and Ionians emerged at times of internal conflicts.

The Athenians undertook the second Sicilian expedition because they wanted to conquer the whole island (VI 6, *alethestate prophasis*). Alcibiades in his speech at Sparta set out the objectives of the Sicilian expedition (VI 90). The Athenians aimed at conquering, first, the Siceliots, then the Italiots and, finally, the Carthaginians. Then by recruiting army and barbarian mercenaries from the region and by building many ships due to the abundant timber of Italy, they hoped to be able to conquer Peloponnesus. In this way, the Athenians would rule over the Greek world, relying on the financial resources of the conquered cities (also, VII 66.2). Thus economic motives were included in the objectives of the potential rule of the Athenians over the Greeks.<sup>414</sup>

Egesta, Athens' ally, which was at war with Selinous, asked for ships from Athens.<sup>415</sup>

The Egestans assured the Athenian assembly that they possessed sufficient resources for the financing of the war. The Athenian envoys in Egesta brought to Athens sixty talents of silver and money for the monthly wages for the crew of sixty ships. In fact, Egesta was not able to meet the expenses of the war (VI 46) and only thirty talents were reserved in its treasury.<sup>416</sup>

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<sup>414</sup> See Smith (1940) pp. 267-301.

<sup>415</sup> An alliance between Athens and Egesta was dated as early as in 458/7 BC (ML 37). The motive of this early alliance might have been the interest of Athens in the grain of Sicily. Athens was in alliance with many cities in Sicily, e.g. in 433/2 BC Athens concluded alliances with Rhegium (ML 63=Fornara 124) and with Leontinoi (ML 64=Fornara 125).

<sup>416</sup> Does the figure of 30 T represent the money usually kept in the *polis* treasury? If yes, then the money reserved in Athens' treasury explains why Athens was a unique city in the fifth century in terms of its financial resources. However, such amount of money seems relatively small to represent the assets of the treasury of a city. The amount of two thousand minae (= ca. 33 T) was imposed on the Spartans by the Elians as fine at the Olympic Games held in the tenth year of the Peloponnesian War (Thuc. V 49-50). Sparta was certainly a city of different size than Egesta. But if ca. 30 T was a fine due to payment by a single city, then we can assume that more than 30 T were to be found in the public treasury of a *polis*. See also Hdt VIII 29: 50 T were to be paid by the city of Phocis to the Thessalians.

The preparation of the whole expedition was based on money. The speeches of Nicias and Alcibiades at the Athenian Assembly underlined the importance of financial resources for the expedition (VI 9-14, 16-18, 20-23). Nicias in his first speech said that the city had recovered after the plague and the ten years war in respect of human power and financial resources but still was not prepared for such a big undertaking as the expedition to the distant Sicily (also VI 26.2: authorial). Thucydides himself made comments on Alcibiades' desire for glory and money, if he conquered Sicily and Carthage. We hear from Thucydides that Alcibiades' extravagant expenses became a reason for Athens' disaster in Sicily. Alcibiades in his speech pointed out that his victories in chariot races at Olympia brought glory to himself and to Athens alike.<sup>417</sup> The rearing of horses for chariot races was costly and affordable only by the leisured class. Alcibiades referred to his *choregiai* as proof of his wealth.

Nicias in his second speech tackled the importance of financial resources for the expedition. In his view, the Sicilian cities were powerful because they had large forces of hoplites, slingers and archers. Also, they possessed many ships and sailors to man them. They had large cavalry. The production of grain on the island was sufficient for the cities there. Moreover, individuals possessed money (*chremata*) and there was money at the temples in Selinous. A particular tax (*aparche*) was imposed on some barbarians by the Syracusans which contributed to the wealth of the city (also Demon 327 *FGrH* fr. 14). Therefore according to Nicias' speech, the power of the enemy was measured in terms of military forces and financial resources. At the assembly in Syracuse, Hermocrates maintains that the gold and the silver that the Athenians possessed would guarantee their success at war (VI 34.2). Therefore the

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<sup>417</sup> Pindar *Pyth.* VII ll. 3-4 praises the victory of the Alcmeonids at horse races.

Athenians planned their expedition to Sicily by committing men and money on a large scale (VI 22).<sup>418</sup>

Eventually, a spectacular armada set off from Piraeus.<sup>419</sup> The preparation of the Sicilian expedition was the most splendid and costly one which was undertaken by a Greek city so far (*paraskeue polutelestata kai euprepestate* 31.1). Each sailor was paid one drachma a day from the city's treasury, while an additional payment was given to the rowers and to auxiliaries by the trierachs. In addition, the ships were equipped with luxurious furniture and ornaments. The whole enterprise was a demonstration of Athens' wealth and power. Since it was an overseas expedition, soldiers and traders carried goods for sale at local markets in Sicily. The private and public expenses for the preparation of the Athenian armada were so large that Thucydides noted that many talents were taken out of the *polis* treasury.<sup>420</sup>

Nevertheless the financial preparation of the expedition proved to be insufficient because the Athenians in Sicily asked for money to be sent from Athens immediately after their landing on the island (VI 74.2). Thus thirty Talents of silver were sent along with cavalry men and slingers (VI 94. 4).<sup>421</sup>

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<sup>418</sup> In the Athenian decrees relating to the Sicilian expedition we find the number of sixty ships and the amount of 3,000 Talents (ML 78=Fornara 146).

<sup>419</sup> Thucydides' language demonstrates close affinities with tragedy (the use of words such as *thambos*, *opsis*, *thean* and *lambrotos*). In this way, the historian anticipates the tragic character of the expedition which ended to disaster. For Thucydides and tragedy see Cornford (1907), Macleod (1983) pp. 140-158.

<sup>420</sup> Blamire (2001) pp. 99-126 estimates that the total resources of Athens on the eve of the Sicilian expedition was 5,500 T on the hypothesis that 500 T a year had been saved since 421 BC.

<sup>421</sup> Kallet (2001) ch. 1 discusses the *paraskeue* of the Sicilian expedition. She emphasizes the visual illusions of wealth and display of power. She explores how Thucydides deals with the issue of real versus illusory power. The final conclusion is that book 6 is to be read against earlier books. In this book Thucydides impugns 'the Athenians for incorrectly interpreting *opsis* in the context of power'. Thucydides' account of the Athenian forces sent to Sicily recalls Herodotus' account of Persian power. Both historians focus on the visual impact of power and wealth.

The Athenian forces which sailed to Sicily were large. Most of the hoplites were Athenians called up from the Athenian registers, but there were some thetes who served as hoplites on board. The allied cities contributed soldiers. Mercenaries also served in the Athenian armada. Slingers, light-armed soldiers and archers were recruited. Thirty horses were carried on a horse-transport. Thirty transport ships (*holkades*) carried supplies, implements for wall building and craftsmen. Moreover, one hundred cargo ships sailed to Sicily and many others followed the campaign (VI 43-4.1). The description of the preparation of the Sicilian expedition echoes a process of colonisation. The Sicilian undertaking invited the whole city to participate. The performance of religious rites (*euchai, spondai*) before the navy's sailing was so splendid that it recalls the departure of an *oikist* to a new land. This issue was raised by the Syracusans (VI 63) who saw the Athenians as settlers rather than as invaders.

The Sicilian expedition invited the participation of many cities in the war. Thucydides gives an impressive catalogue of the allies which fought on each side in the final battle at Syracuse (VII 57-8). In Thucydides' own words what prevailed in the decision of the cities to line up with Athens or Syracuse was not a sense of justice or kinship but chance (*xyntychia*), self-interest (*xympheron*) and necessity (*ananke*).<sup>422</sup> The Sicilian expedition like the Peloponnesian War as a whole, changed the traditional concept of kinship. The Greek war was not perceived entirely as a conflict between Ionians and Dorians.<sup>423</sup> New factors entered Greek warfare. This is evident in

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<sup>422</sup> Similarly, there is no reference either to Dorians or Ionians in Thucydides' catalogue of Sparta's and Athens' allies on the eve of the war (II 9).

<sup>423</sup> According to Will (1956), the Dorian-Ionian distinction was just mere sophisms and rhetorical argumentation that the orators exploited as an oratorical trick without any appeal to real ethnic feeling. Alty (1982) concludes that ethnic feeling played a role. 'This feeling may have been ridiculed by the intelligentsia and exploited for their own ends by politicians. But its potential for creating sympathy, hostility or misunderstanding amongst the populace was ignored by both groups at their peril' p. 14. Andrewes in *HCT* on V.80.2 writes that 'considerations of race and origins are often advanced by ancient writers as motives for political actions and they may have been more effective than we are



the speech of Hermocrates where referring to the relationship between the Athenians and Leontinoi, which was a colony of Chalcis, he claimed that the Athenians had no Ionian strategy in mind (VI 76). Again, Hermocrates claimed that Athenian imperialism attacked all cities regardless of race (IV 61.2 ).<sup>424</sup> Similarly, the Athenian Euphemus pointed out that only self-interest governed the system of alliances and conflicts adopted by the city at the head of an empire. Thus military alliances were determined by the need of the weak to obey the powerful, that is, the Athenians who dominated the seas. Also, the money paid to mercenaries and the hatred of certain cities for others, like Corcyra for Corinth and Argos for Sparta, determined military alliances (VII 57. 7, 9, 10).

Did Thucydides diminish the importance of kinship as a factor making for alliances during the Sicilian expedition and the Peloponnesian War because he emphasized the economic factors and understood certain changes brought by the war? To a degree, yes. In his history he rarely provides his reader with full information about ethnic feeling between Dorians and Ionians and its importance for political actions. This could be explained, first, because kinship was connected with myth and religion. Nonetheless, Thucydides was not particularly interested in religion and hence he emphasized the importance of other factors for decision making in the cities.<sup>425</sup> Second, in the historian's view, the true cause of the Peloponnesian war was the growth of Athenian power (*alethestate prophasis*, I 23.6, 86.5). His concept of power

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inclined to imagine'. Romilly (1963) p. 33 believes that 'every reference of Thucydides to either ethnic hostility or common ethnic origin is just an explanation for Athenian imperialism'.

<sup>424</sup> Hermocrates argued for unity between the cities in Sicily because they shared the same name, that is, Siceliots (IV 64.3). The term Sikeliotai first appears in Thucydides (III 90.1). In Herodotus (IV 15.2) we find only the term Italiotai. See Antonaccio (2001) pp. 113-157.

<sup>425</sup> For Thucydides and religion see Marinatos (1981). Her main conclusion is that Thucydides' criticism was directed not against religion but against superstition. Oost (1975) pp. 186-196, Powell (1979) p. 15, Hornblower (1992b) pp. 169-197.

was based on preparedness and financial revenues. Hence he explained the political alliances and conflicts in the framework of his initial concept of the importance of finances for the diplomacy conducted by the Greek cities. At least, this is to be found in his account of the Sicilian expedition, where the economic factors were underlined from the beginning of its preparation.

However, we cannot argue that the Ionian- Dorian distinction was entirely excluded from his history. Thucydides' vocabulary often allows such a perception (VI 77.1, VI 80.3, VI 82.2, VII 57. 2, 4). In my view, Thucydides was aware of ethnic feeling between Dorians and Ionians and allowed a considerable space for political argumentation based on kinship (e.g., I 95, I 68-71, V 112.2, III 86). This was because Thucydides, as we argue later in this chapter, allowed other factors than economics to enter his historical reasoning because these 'other' factors often defined the *polis* undertakings and prevailed in the ideological perception of reality by the Greeks.

Why did Thucydides deal extensively with the economic aspects of the *paraskeue* for the Sicilian expedition? In his account of the previous military operations of the Greek cities gave limited coverage to economic factors. In my view, Thucydides used the narrative of the Sicilian expedition as the field where his concept of power as *paraskeue* and *periousia chrematon* was tested and proved to be either correct or wrong. The Sicilian expedition gave ample room to the historian to demonstrate his understanding of the role of finances. For, first, it was a naval expedition. Second, it aimed at the expansion of the Athenian *arche*. Third, the entire venture was motivated by the Athenians' desire for acquiring additional resources.

The first encounter between the Athenians and the Sicilians took place near the city of Syracuse and it was a hoplite battle (VI 67-71). The Athenians were victorious. They took the spoils of the battle but not the money kept at the temple of Olympieion. Plundering led to other kinds of economic transaction. For example, the booty sold by the Argives gave them a total of twenty-five talents (VI 95). Meanwhile changes occurred in the Athenian army, since Alcibiades, one of the three generals in Sicily, deserted to Sparta to escape trial at Athens for alleged sacrilege.<sup>426</sup> Moreover, the arrival of the Lacedaemonian Gylippus with ships and military forces in Sicily changed the course of the war there.

The Syracusans and their allies, in the presence of the Lacedaemonian and Corinthian forces, developed new military qualities and practices, which functioned as the counterpart to Athenian *paraskeue* and military experience. First, they began building a wall to prevent the Athenians from blockading Syracuse (VII 4). Second, they manned their navy and were trained in naval warfare (VII 7). While the Syracusans had been improving their fighting techniques, the Athenians faced serious difficulties. So Nicias wrote a letter to the Athenian assembly (VII 11-15). According to Nicias, the Athenians in Sicily were in a difficult position because their ships were kept in the water for a long time and thus were being destroyed, the provisions for the army were hardly acquired and many of the Athenian troops deserted to the enemy out of a desire for better payment. Moreover, some of the soldiers engaged in trade, and therefore slaves replaced them and served in the navy. In this way, the Sicilian expedition turned to be a pursuit of economic interests rather than a military undertaking.

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<sup>426</sup> The mutilation of the Hermes and the profanation of the Mysteries committed by some Athenians at the time of the Sicilian expedition received the historian's full attention as a factor which seriously affected the whole Sicilian enterprise (VII 27-8, 60-1 and Melanthios 325 *FGrH* Fr 3 a,b, Philochorus 328 *FGrH* fr. 134, Scholiast to Ar. *Birds* l. 766. Scholiast to Ar. *Lysistr.* l.1094).

In response to Nicias' letter, the Athenians voted to send to Sicily 120 Talents, infantry and navy called up from the registers of the three upper classes and from their allies (VII 16, 20) and Demosthenes and Eurymedon as generals (VII 42.1).<sup>427</sup> At the same time, the Spartans sent six hundred hoplites picked from the helots and the *neodamodeis* (VII 19). When the war was expanded outside the mainland, the Lacedaemonians turned to different groups of their population in order to man their army. Also, hoplites were used as mercenaries (with *misthos*), for example, the Arcadian hoplites who were recruited by the Corinthians (VII 19).

The arrival of Demosthenes in Sicily gave a new dimension to the war. He favoured quick and direct action and thus he attacked Epipolae during the night (VII 43-5).<sup>428</sup> This attempt ended up with the failure of the Athenians. Finances became a matter of the Athenian generals' concern. In their view, it was useless for Athens to spend an enormous amount of money for financing the Sicilian expedition, since the enemy was settled in Attica itself (VII 47.4). On the other hand, Nicias addressed himself the question of the revenues of the Syracusans. He believed that they were going to face economic bankruptcy since they had already spent two thousand talents on the war. Moreover, they needed money to sustain the mercenary troops, to maintain the forts and to finance a large fleet. The concept of money as a factor making for success in war, which was worked out by the historian and the protagonists of his history at the beginning of the Sicilian expedition, is predominant in this part of the Sicilian narrative (VII 48.6). Nicias hoped for a possible Athenian military success since the Athenian army possessed large financial resources. So the Athenians postponed their departure from Sicily because they had enough revenues to finance the expedition.

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<sup>427</sup> The Thracian peltasts who were to join Demosthenes' forces with the payment of one Attic drachma daily were discharged because of the poor finances of the city (VII 27, 29.1).

<sup>428</sup> For Demosthenes' strategy see Hunter (1973) ch. 6.

The final naval battle at the Great Harbour in Syracuse was for the Athenians a total disaster. The Athenians and their allies, who survived, tried to escape from the Syracusans.<sup>429</sup> A large part of the Athenian army was destroyed at the Assinarus river (VII 84.3-4).<sup>430</sup> The Athenians, who escaped from the Syracusans, were sold as slaves. Some of the captives were put to work in the stone-quarries (VII 87.1-4, Plut. *Nic.* 29. Diod. XIII 33.1).<sup>431</sup>

Money is still the main topic in Thucydides' account of the final scene of the Sicilian disaster. Demosthenes' soldiers gave their money to the Syracusans to save their lives. Four shields were filled with money from the Athenians. It was coined money (Athenian 'owls' or local currency) which the soldiers carried to buy provisions at the local markets.<sup>432</sup> In accordance with Nicias' proposal to Gylippus and to the Syracusans, Athens was able to pay back to the Syracusans the expenses of the war.<sup>433</sup> Nicias, trying to conclude an agreement with the Syracusans, offered to pay one talent

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<sup>429</sup> Gylippus and the Syracusans invited the islanders to join the Peloponnesian forces. In Thucydides' text as transmitted (VII 82.1), the islanders who deserted to the Syracusans were few (*tines poleis ou pollai*). This has taken as a pointer of loyalty to Athens on the part of its allies. De Ste Croix (1954) p. 11, against Bradeen (1960) pp. 57-69.

<sup>430</sup> Thucydides in his account of the massacre of the Athenians at the Assinarus river adopts a poetical approach to human suffering by the means of narratological devices and themes. Thus the *pathetikon* style is predominant in his narrative: Dion. Halic. *De Thuc.* 24.363 with Pritchett *Comm.* ad loc.

<sup>431</sup> Certain wealthy Athenians ransomed some captives, e.g. the Cyrenean Epicrdes was rewarded by the Athenians because of his expenditure (100 minai) in rescuing some captives (Dem. 20.42). Androtion (324 *FGrH* fr. 44) mentions an agreement between the Athenians and the Lacedaemonians, according to which the captives were ransomed for one mina each. See Kelly (1970) pp. 127-131, Panagopoulos (1989) pp. 132-144.

<sup>432</sup> Kallet-Marx (1993) p. 175 estimates that the four shields would probably have held 10-12 T. Her calculation is based on combinations of tetradrachms and drachmae, which filled the shields. In my view, coins of smaller denominations such as obols would have filled the shields, since it seems more probable that the Athenians received their payment in smaller coins than tetradrachms and used fractions for the purchase of their everyday provisions.

<sup>433</sup> This practice is common in Greek warfare. For instance, the Samians after their first revolt from Athens were obliged to repay the expenses of the war in instalments over a prescribed period (I 117, Plut. *Per.* 28.1, Diod. 12. 28.3-4). According to literary sources (Nepos *Timoth.* 1.2, Diod. 12. 28.3-4, Isocr. 6.111), the expenses of the war were 1,200 T but in an account of the treasurers of Athena the amount of 1,400 T is given (ML 55=Fornara 113). The Samian indemnity was paid off in annual instalments of 50 T and the last instalment was probably paid in 414/3 BC. See ML p. 151, Unz (1985) p. 27.

for each Athenian hostage (VII 83).<sup>434</sup> Nicias' offer indicated that Athens had still enough revenues to defray such great expenses.

## **7. The Sicilian catastrophe and its effects on the economy of Athens**

The Sicilian expedition was a catastrophe for Athens. The seventh book of Thucydides concluded with a statement of Athenian suffering at the end of the Sicilian expedition. Undoubtedly, the Sicilian disaster was a blow to the morale of the Athenians. But did the failure in Sicily lead to economic disaster in Athens in Thucydides' view? The historian had already given his own judgement on the Sicilian expedition in the second book (II 65. 11-2). In his opinion, the Athenian failure in Sicily happened because the politicians, who decided the expedition, were involved in competition about leadership. However, he says, the Athenians maintained the war for ten years longer, fighting successfully against the forces of the Peloponnesians, against the Siceliots and against allies who revolted, at the time when the enemies relied on Persian money. Thucydides did not imply that Athens experienced economic disaster after Sicily. Thus Thucydides implies either that the treasuries of Athens were not totally depleted after Sicily or that the Athenians developed mechanisms to retrieve money for the expenses of the war which enabled them to carry on the war.

The end of the seventh book leaves the reader with the impression that, despite the two wars that Athens fought at the same time, the treasury of the city was not empty. Nicias in his final words to the demoralised Athenians referred to the ability of the Athenians to rebuild their power after their defeat in Sicily (VII 77.7). Money was the

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<sup>434</sup> The Peloponnesians gave one daric stater for each prisoner to Tissaphernes (VIII 28. 4). One Talent was offered to Pericles by each of the Samian hostages (Plut. *Per.* XXV).

heart of Athenian power. Again, Nicias' words imply either that the treasuries of the city were not empty or that the city had the means to increase its revenues.

However, the Sicilian disaster affected the entire political edifice of the city. The eighth book begins with its consequences for Athens. The city was deprived of a considerable number of hoplites and cavalry men. There were not many ships in the harbour. There was no money in the treasuries. This authorial statement does not contradict the above argument. According to our argument, it implies that the treasuries of Athens were short of liquid money. But ready cash was required for military payments. In this sense, Athens faced an economic crisis after Sicily but not total bankruptcy.<sup>435</sup> The financial records of the treasurers of Athena provide evidence that after the Sicilian disaster many of the state expenses were financed by the treasury of Athena. At the same time the treasury of the *Hellenotamiai* had a surplus to finance the war chest (see chapter 1). The Athenians set up a programme to meet the difficult situation. They undertook the building of a fleet. They rebuilt the loyalty of their subjects. They employed a new economic policy, introducing many cuts in state expenses (VIII 1, 4). The clear-cut new economic policy indicates that Athens did not face total bankruptcy after the Sicilian disaster but an economic crisis which the Athenians tried to overcome by effective measures. However, because of the economic crisis and the military difficulties produced by the revolt of Chios (VIII 14) the Athenians used the iron reserve, that is, the one thousand talents reserved on the Acropolis during the war (VIII 15).

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<sup>435</sup> The economic crisis led to cuts in certain expenses. Loomis (1998) argues for 50 to 100% cuts in wages in Athens after the Sicilian disaster and the Spartan occupation of Dekeleia (412-403 BC).

The effects of the economic programme of the Athenians became evident at the military level. The presence of the Athenian navy in the Aegean demonstrated Athens' ability to build new warships and to finance naval war. The Athenians won many naval battles during the Ionian War, thus disproving the estimation that the Athenian power was about to collapse after the Sicilian disaster (VIII 24).

## 8. Thucydides on the Athenian *arche*

So far we dealt with the importance of financial resources for the actual warfare during the Peloponnesian War. Now we shall consider the economic character of the Athenian *arche*. We have already referred to Thucydides' perception of the Athenian power as based on *περιουσία χρημάτων*. How was the authorial concept of Athens' *arche* justified by the narrative of the war? In the following argument we shall discuss both the function and the theoretical conception of the Athenian *arche* as they are set out by the historian himself and the protagonists of his war. Also, we shall discuss the extent to which we can understand the Athenian economy from the views of the *arche* which Thucydides and the heroes of his history held.

Thucydides at the beginning of his history (I 19) stated that the tribute (φόρος) paid to Athens by its allies (apart from the Chians, the Lesbians and the Samians who contributed ships (Ar. *Ath. Pol.* 24.2)) was the main financial resource for Athens.<sup>436</sup> According to Thucydides, the first assessment was 460 Talents (I 96). Pericles (II 13.3) argued that the total tribute payment amounted 600 Talents (also Plut. *Arist.*

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<sup>436</sup> According to the formula established by Aristeides, one ship provided by the allies was probably one talent of tribute. See Blackman (1969) pp. 179-216. Thucydides uses the word *phoros* for tribute, a word which implied internal taxation, while the word *dasmos* was related to tribute paid to the Persian king. See Whitehead (1998) pp. 173-188.



XXIV 4-5). Some time after the foundation of the Delian League, the cities started paying money, instead of contributing warships. From the tribute money the Athenians financed the building of their navy (I 99.3 and Plut. *Cim.* XI 1-2).

The possession of a substantial navy at the time of Themistocles is considered by the historian to be the basis of the Athenian power (I 93.3-4). Pericles, in his first speech (I 143.5), pointed out that the Athenian power was based on the allies. He was alluding, first, to the tribute paid by them and, second, to their contribution of troops (also III 13. 6: τῶν χρημάτων τῶν ἀπὸ τῶν συμμάχων πρόσσοδος).<sup>437</sup> In addition, part of the imperial revenues came to Athens by the means of religion and, in particular, by imposing religious duties on the allies. For example, the Thoudippos Decree passed in 425/4 BC (ML 69=Fornara 136) imposes on the allied cities the obligation to bring a cow and a panoply of armour to the Great Panathenea (II. 55-60). The same provision is found in the decree of Cleinias passed in 447 BC (ML 46, II. 41-43). Similarly, the payment to Athena of the *aparche*, that is, the one-sixtieth of the assessed tribute payment, demonstrates how the cities of the Delian League provided Athens with imperial revenues. The money of the *aparchai* was reserved in the treasury of Athena and was under the management of the treasurers of Athena. The monies of Athena financed much of the state expenditure and part of the expenses of Peloponnesian War, as emerges from the records published by the treasures of Athena (see chapter 1).

Archidamus (I 80) defined the character of Athenian power. In his view, the power of Athens consisted of wealth, navy, military forces, a large population and allies who

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<sup>437</sup> From Thucydides' account of several battles, it emerges that Athens' allies lined up on Athens' side with considerable military forces. The Casualty Lists show that many allies joined the Athenian army. See Cawkwell (1997) Appendix 3.

paid tribute. Pericles maintained that the power of Athens derived from its dominance on the sea (similarly Isocr. *Peace* 37-8). Thus he called his fellow-citizens to behave as if they were islanders and abandon their farms and their houses in the countryside (I 144).<sup>438</sup> Pericles also offers a view of the power of Athens and of the nature of the new war undertaken by the Greek cities (II 13). In his words, the Athenian *arche* relied on financial revenues. In his review of Athens' revenues, he mentions the tribute money, six thousand Talents of silver in coins (*episemon*); gold and silver as bullion (*asemon*); the sacred articles used at festivals and Games, the spoils of the Persian wars and various objects worth no less than 500 Talents.<sup>439</sup> In addition, the Athenians were able to use, if necessary, the golden ornament of the statue of Athena, which was worth 50 Talents.<sup>440</sup> He defined Athenian power as naval and so he asked

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<sup>438</sup> Also, II 16.2-17.4 with Hornblower *Comm.* ad loc. The passage vividly describes the Athenians' reaction to the need to abandon their 'native city' and, simultaneously, illustrates the pattern of the organisation of Attica in demes. The relation between country and city is depicted as well. See Ar. *Ach.* II. 384-6, *Peace*. II. 535-647. A sharper distinction between countryside and city was drawn after the Peloponnesian war and especially in the fourth century. A large number of Athenians resided in Athens and in the Piraeus. This is confirmed by the sepulchral inscriptions from the fourth century, since a great number of tombstones are found in Athens and in the Piraeus (Hansen *et alii.* (1983) pp. 25-44, Nielsen *et alii.* (1987) pp. 411-420)). Considerable migration from the countryside to the city in the fourth century can be explained by the increase in trading and banking activities taking place in the *asty* and in the Piraeus. The growth of professionalism in the fourth century led politicians to reside in the city in order to carry out their duties in the Assembly. Similarly, professional mercenaries would reside in the city in the intervals of their military service. Many slaves would reside in the *asty*, since they were mainly involved in commercial activities. But during the classical era the Attic countryside was never abandoned. The rural basis of the economy of Athens kept the Athenians in the country for part of the time. Many Athenians owed houses in the city and in the country. The political life of the demes and the religious festivals celebrated there attracted many Athenians.

<sup>439</sup> With Rhodes *Comm.* ad loc. In Arist. *Wasps* (II. 657-60), the figure of 2,000 Talents is given as the total revenue accruing to Athens from the tribute of the allied cities, the taxes, one per cent taxes, the court dues, the silver mines, market-taxes, harbour dues, rents from property, sales of confiscated property. Even if we take the figure of 2,000 T to be comic exaggeration, it is still indicative of the sources of Athens' revenues. The passage of Aristophanes refers to revenues in liquid money, mainly, in Athenian silver coinage, since all the transactions quoted in the passage required cash. However, to the revenues of Athens we can add the bullion which was part of the treasures of the Attic sanctuaries. For example, in the inventory of the Parthenon of 422/1 (Tod 69) precious objects such as golden crowns, drinking cups, masks, and jewellery were recorded.

<sup>440</sup> Philochorus *FGrH* 328 f 121: 44 T, Diod. XII 39: 50 T, Plut. *Per.* 13. In the accounts of Pheidias' statue of Athena from the years 447-438 BC the total cost of the statue is between 700 and 1,000 T (ML 54=Fornara 114).

the Athenians to move into the city's walls.<sup>441</sup> Pericles' view of the Athenian *arche* received the historian's approval.

Again, according to Pericles (II 60-4), Athenian power was a sea-power and this enabled the Athenians to rule over their subjects (also *Old Oligarch* 2-3: Athens, being a sea-power, ruled over its subjects by fear and necessity). The maintenance of the *arche* became the Athenians' objective during the Peloponnesian War. The Athenian *arche* turned into a tyranny (verbal near repetition in Cleon's speech (III 37.2), *Ar. Ath. Pol.* 24.2).<sup>442</sup> Pericles' view of the Athenian *arche* corresponded with that of the Mytilenean envoys at Olympia (III 11-12). They said that in the early years the Athenians exercised their power over their allies on a footing of equality (*apo tou isou*) but, after their power had been increased, they enslaved their allies and deprived them of their autonomy and freedom (in fact, of the two elements which along with self-sufficiency, according to Aristotle, defined the political structure of a city-state) (and IV 92.4, VI 76: *katadoulosis*). Thus it was fear (φόβος) which kept the allies loyal to Athens.

The collection of the tribute during the war was a constant element in the war policy of Athens. At the beginning of the war the Athenian general Melesandros was sent on a mission to collect the tribute from Caria and Lycia (II 69) (*hopos argyrologosi*). Before the siege of Mytilene the Athenians, who were in need of money, sent the general Lysicles with twelve ships (*argyrologoi naus*) to collect the tribute of their

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<sup>441</sup> The nature of the Athenian power at its heyday is described in Plut. *Per.* XV 1. The Athenians ruled over 'tributes, armies, triremes, the islands, the sea, the vast power derived from Hellenes and from barbarians'. Athens secured its supremacy through 'subject nations, royal friendships and dynastic alliances'.

<sup>442</sup> Was the Peloponnesian League more democratic than the Delian League? From Thucydides we know that in the Peloponnesian League decisions were made by the majority of the allies (V 30.1). See Cartledge (2002) pp. 223-230.

allies (III 19). The war demanded direct collection of the tribute money. Thus Athenian generals were involved in the collection of tribute, although the administration of the tribute was in the hands of officials (e.g. the *Hellemotamiai*) (see ch. 1). Later in the narrative we hear of the tribute-collecting activities of Athenian generals Aristides and Demodokos in the region of the Hellespont (IV 75).

Thucydides' work provides us with the Athenian ideology towards their empire. The Athenians in Sparta presented the theoretical basis of their *arche* (I 73-8). They claim that the Athenians possessed their *arche* not by violence but because it was bestowed on them by the Greek cities (I 96.1). They acknowledged the dominance of the powerful over the weak as a universal rule. Nevertheless their power was exercised with justice. The Athenians gave, with astonishing clarity, the main principles which maintained their hegemony, that is, honour (*time*), fear (*phobos*) and self-interest (*sympheron*). In this imperial ideology the traditional concept of honour was fused with the new doctrine of self-interest.<sup>443</sup>

Cleon in his speech for the punishment of the Mytileneans after the suppression of their revolt from Athens offers further evidence for the Athenian ideology towards their *arche* (III 37-40). The Athenians rule over their allies by the means of power (*ischys*). Power dominates justice. Power brings *hybris*.<sup>444</sup> The Athenian *arche* is harmed by pity (*oiktos*), by charm derived from beautiful words (*hedone logon*) and

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<sup>443</sup> In my view, traditional values conditioned the ethics of the city-state in the fifth century. Even in democratic Athens, Homeric values determined the citizens' moral conduct while at the same time new civic qualities were developed. For example, the heroic qualities of *aidos* and *time* were pursued by the Athenian citizens at the same time that *sophrosyne* became a new intellectual and ethical quality. Sophocles' *Ajax* shows how heroic and civic values were fused and challenged each other in order for the values of democratic Athens to be formed.

<sup>444</sup> The concept of *hybris* as a result of immense power was a constant element in the argument of many speakers in Thucydides' history, e.g. the Spartan envoys at Athens (IV 18.2: *hybrisantes*). See Fisher (2002) pp. 84-112.

by indulgence (*epieikeia*). Thus the very nature of Athenian power demands severe punishment of people who attempt to free themselves from the hegemony of Athens. Diodotus' moderate speech, which follows Cleon's speech, gives a glimpse of how the use of violence (*bia*) established Athens' hegemony in the Greek world (III 46. 5).<sup>445</sup>

The Melian Dialogue (V 85-111) gives the theoretical basis of the Athenian hegemony. According to the argument of the Athenians, they acquired their *arche* justly because they defeated the Persians. Justice is defined by power. Power sustains the freedom of the *poleis*. It is according to the law of nature for the powerful to rule.<sup>446</sup> Justice (*dikaion*) and self-interest (*xympheron*) were fused in the definition of the Athenian rule over the Greek cities. But these were sharply rejected by the Melians when asserting their rights.

In Alcibiades' view of Athenian imperialism (VI 17-18), supremacy on the sea was the very reason for the rise of the Athenian hegemony. Moreover, the readiness of the Athenians to help their allies at war established their rule upon them. Thus the empowerment of Athens originated in the concept of justice (*dikaion*). The factors tending to dissolve Athens' *arche* were *hesychia* and *apragmosyne*, namely, withdrawal from action and exposure to perils.

Euphemus' speech at Camarina offers further justification for Athenian imperialism (VI 83-5). The Athenians ruled over the Greek cities because they were worthy to rule (*axioi ontes*), for they offered their fleet for the Greek war against the Persians. Thus

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<sup>445</sup> See Wassermann (1956) pp. 27-41.

<sup>446</sup> See Crane (1998) ch. 7.

they fought for the freedom of the Greek world. For a city which exercises hegemony nothing seems to be irrational, if it serves its own interests. So the Athenians followed their interests and this moulded their policy towards the Greek cities.

In Thucydides *History* the theoretical justification of the character of the Athenian hegemony finds its factual enactment in the methods employed by Athens in order to maintain its power. Power led the Athenians to use violence against their allies. The Athenians committed atrocities after the suppression of the revolt in Mytilene (III 50). Similarly, the adult Melians were killed after their surrender to the Athenians (V 116). The women and the children were sold as slaves. Athenian settlers (*apoikoi*) were sent to the island.

Certain initiatives taken by Athens at the peak of its imperialism demonstrated the nature of the power of Athens. The purification of Delos was such an initiative (III 104). The Athenians removed the burials from the island and founded the Delian festival. The Athenians also revived the old gathering of the Ionians on the island. Later they drove away the inhabitants of the island because they had not been purified (V 1). Eventually, the Athenians re-settled the Delians on their island after being instructed to do so by a Delphic oracle and after a sequence of failures at war (V 32).<sup>447</sup>

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<sup>447</sup> The activity of the Athenians on Delos in 426 BC shows how the *polis* religion of Athens became the religion of the Athenian *arche*. Athens imposed its religious policy on the cities of the Delian League while religion became a means for exercising its *arche*. For example, the participation of the allies in the Athenian festivals, the 'abuse' of religious 'laws' (the destruction of the sanctuary at Delion, Thuc. IV 97), the exploitation of myths for the purpose of political propaganda (especially the myth of Theseus with its implications for the unification of Attica and to Athenian democracy), the sacred enclosures of Athenian gods (*temene*) in allied territory (in Aegina (*IG* IV 29)). See Sourvinou-Inwood (1990) pp. 295-322.

The Megarian Decree, which was passed by the Athenians in 433 BC (I 67.4, 139.1-2, Diod. XII 39.4, Plut. *Per.* 29.4, 30-31, Schol. to Arist. *Acharn.* l. 532), is revealing about Athenian imperialistic practices. According to the Megarian Decree, the Megarians were to be excluded from all the harbours over which the Athenians had control and from Athens' market. They were accused by the Athenians of using sacred land and harbouring runaway Athenian slaves. Political and economic interests might have been motives for the decree. Thucydides recorded the Megarian Decree, although other significant Athenian decrees were omitted in his history, for instance the so-called Coinage Decree. Why did the Megarian Decree serve the ends of Thucydides' historical analysis?

Let us first consider the political objectives of the decree. Megara was in alliance with the Peloponnesians and thus many hostilities between Athens and Megara took place (e.g. the Athenian expedition to the Megaris in 446 BC (ML 51, Diod. XII 5, Thuc. I 114). When Athens expanded its power all over the Aegean, Megara, which lay close to Athens, became a target of Athenian expansionism. The decree therefore reflected the will of Athens to impose its power on Megara and to enforce an alliance between the two cities. Political decisions made by the Athenian *boule* became an effective means for the Athenians to exercise their power over the Greek cities. Thus Athenian decrees often replaced military undertakings.<sup>448</sup>

Moreover, the decree aimed at damaging the economy of Megara. The economy of the city was mainly based on trade. The loss of the harbour of Minoa during the

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<sup>448</sup> In many Athenian decrees passed at the time of the Athenian *arche* a strong imperialistic character is evident. For instance, in the decree with which the Athenians imposed regulations on Miletus we find the provision that 'if any of the Milesians or the *phrouroi* disobeys the five Athenian *archontes*, they themselves shall have authority to impose fines...' (Fornara 92).

Peloponnesian war seriously affected the city's economy.<sup>449</sup> Possessing a fleet and engaging in trade, Megara was an important ally for the Peloponnessians. The Megarian decree was meant to prevent the Megarians from commercial shipping and, at the same time, to diminish their importance for the importation of commodities to Peloponnesus from the Aegean and the Black Sea where Megarian traders operated. Agricultural production was deficient in Megara.<sup>450</sup> The Megarians used to acquire their provisions from the Athenian market where many commodities found their way from different places (Thuc. II 38.2, Hermippos *Stevedores* fr. 63). Hence we can take seriously the picture of the Megarian in Aristophanes *Acharnians* who faced starvation as consequence of the Megarian decree (ll. 719-835). In conclusion, the Megarian Decree reflected Athenian imperialistic methods. Moreover, it aimed at the financial deprivation of the enemy and thus of his capability to maintain a war, which demanded money, according to Thucydides' concept of δύναμις.<sup>451</sup>

The Megarian Decree, like most Athenian decrees which were passed in the time of the Athenian empire had political and financial aims. In my view, Thucydides chose to include this particular decree in his narrative for the following reasons. Firstly, because it was related to the causes of the Peloponnesian War and the causes of the war was one of the historian's main concerns.<sup>452</sup> Secondly, because it was a product of the policy of Pericles. Thucydides' history favoured Athenian democracy and the Athenian *arche* of the Periclean era. Therefore the Megarian Decree found a place in his narrative. Thirdly, on the evidence of Plutarch (*Per.* 31), the enactment of the

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<sup>449</sup> The Athenian invasions of the Megarid during the war affected the economy of Megara as well, but probably not very heavily, because it was not entirely dependent on agricultural production.

<sup>450</sup> There was husbandry and thus woollen garments were the main articles of exportation (Ar. *Ach.* 519, *Peace* l. 1003, Xen. *Mem.* 2.76). See Legon (1981) ch. 4.

<sup>451</sup> For the Megarian Decree see Legon (1981) ch. 9, de Ste Croix (1972) pp. 225-292.

<sup>452</sup> Even in its Aristophanic parody (*Acharn.* 524-40) the decree was related to the cause of the war.



decree and Pericles' insistence on its enforcement caused severe criticism of his policy and especially of his private life. Thucydides' record of the decree without comment indicated his rejection of the charges against Pericles.

## 9. Thucydides on the power of the Peloponnesians

The Athenian *arche* was built up on money. The possession of money enabled the Athenians to carry on the war. Their power was (*onete*) in the Corinthians' words (I 121.3). But then why did the Peloponnesians make a war against a power concentrated on money? Moreover, why did they win the Peloponnesian War? In other words, what did Thucydides think was the essence of Peloponnesian power? We must ask whether Thucydides' perception of power as *periousia chrematon* and *nautikon* changes in respect of Spartan power.

The allies of the Lacedaemonians did not pay tribute (I 19). This is clear from the inscription of the contributions to the Spartan war-fund (*ca.* 427 BC) (ML 67). Archidamus said that there was no money in the public treasury and individuals were not willing to offer their own money (I 80). Pericles (I 141-2) said to the Athenian Assembly that the Peloponnesians lacked private and public wealth since they farmed their land themselves (*autourgoi*). They did not possess a navy and, moreover, they were not prepared to maintain a war which was determined by money (this echoes Archidamus' statement that war was not so much a matter of weapons as of expenses (I 83.2) which is repeated in Plutarch's (*Kleom.* 27.1) statement that 'money is the nerve of the affairs of war').

Therefore the power of the Peloponnesians was not decided by possession of money and of ships. Then how did the historian perceive the power of the Peloponnesians? Archidamus sets out the qualities of the Spartans. They were characterised by prudence (*sophrosyne*), which made them good warriors and sensible men (I 84).<sup>453</sup> The feelings of honour (*aidos*) and shame (*aischyne*) safeguarded their bravery and their respect for laws.<sup>454</sup> The Corinthians pointed out that experience in war affairs was to give the Peloponnesians supremacy in war (I 121.2). Also, their bravery (*eupsychia*) was to be proved essential for victory over the Athenians. Archidamus considered obedience and discipline to be predominant qualities of the Peloponnesian army (II 11). Similarly, the Spartan generals before the naval battle at Naupactus encouraged their troops emphasizing bravery (*eupsychia*) as their virtue (II 87. 4-6). The same quality was predicated of the Peloponnesians by the Athenian Phormion (II 89. 2). According to the established perception of Spartan virtue, neither famine nor any other need could demoralise the Spartan warrior (IV 40). Brasidas in Thrace encouraged his soldiers by stressing Spartan courage on the battlefield (IV 126. 2). Again, he considered willingness (*ethelein*), feeling of shame (*aischynesthai*) and obedience (*ypakouein*) to be cardinal qualities for success at war (V 9).

Thucydides in his account of the battle at Mantinea described Spartan *arete*. Their long-term training at war affairs proved decisive for their victory (V 69). The Spartans excelled all the Greeks in bravery (*andreia*) (V 72.2). They proved to the Greeks, who condemned them for thoughtless and slowness after their defeat on Sphacteria, that they possessed all those qualities that made them victorious in war (V 75.3).

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<sup>453</sup> According to Pericles, *gnome* (like *sophrosyne*) is the civic quality which along with money bring victory to war (II 132).

<sup>454</sup> *Aidos* and *peitho* were the main objectives of the Spartan *agoge* (Xen. *Lac. Pol.* II 14). Thus the Spartan system of education turns out men more obedient (*eupheithesteroi*), more respectful (*aidemonesteroi*) and more strictly temperate (*egkratesteroi*).

Thucydides praised the Lacedaemonians (and the Chians alike) for living in prosperity and wisely (*eudaimonesan, esophronesan*) (VIII 24.4)

Did Thucydides abandon his concept of power as possession of money and navy and, instead, employ the traditional pattern of *arete* when dealing with Spartan power? To a degree, yes. In my view, Thucydides, despite his programmatic definition of power and despite his emphasis on the economic aspects of the power of the *polis*, allowed in his account of the war conceptions of qualities, which were established by a long tradition and which determined power and victory at war. In other words, the historian, although he developed a deep understanding of financial resources as an important factor for the Peloponnesian War, took into account, to a considerable degree, concepts of power and of values which derived from poetry and from philosophical debates of his era. He applied this traditional view of power to the Lacedaemonians, since it was they who represented conservatism. Furthermore, Greek tradition always attributed to them an unchanging *politeia*.

We argued in the second chapter that Herodotus was influenced by the concept of wealth as it was moulded by poetry and tragedy. Thucydides by contrast clearly defined his view of power as money and navy, but he was not prepared to abandon entirely the view of power and of victory at war, which prevailed in the view of his contemporary Greeks. I think, the same principle lies behind his stance on religious matters. It is true that he was not interested in religion and he did not allow in his narrative long digressions in religious and miraculous matters, as Herodotus did. However, in Thucydides' history religion was embedded in the political decisions of the cities (e.g. the conclusion of treaties). Moreover, religion affected the conduct of

individuals whose words and deeds were the subject-matter of the *History*. We can conclude that Thucydides' concept of power was not elucidated as money and navy in the entire history. Thus his *History* is not to be read as an economic history of the Peloponnesian War.

If the above argument is right, then it will be interesting to see how the historian tackled his concept of power and apply it to the Lacedaemonians. We argued before that the Lacedaemonians at the beginning of the war and for a long period lacked financial resources and a navy to fight effectively against Athens and its allies. Instead they possessed other qualities which proved them strong opponents for the Athenians.

However, Thucydides' narrative reveals how the Peloponnesians in the course of the war acquired both money and navy. It was again Archidamus' prescient speech in the first book which emphasized the importance for the Peloponnesians to acquire money and warships in order to undertake the war against the Athenians (I 82-3). The same objective derived from the Corinthians' speech (I 121.2-3). Loans from the temples of Delphi and Olympia were to provide them with the money to finance their war against the Athenians hiring out mercenaries with large wages.<sup>455</sup> Moreover, the Corinthians' speech initiated the procedure of developing the traditional qualities of the Peloponnesians and of adopting new practices required for the new warfare. Thus they proposed to their allies that they should all work towards the revolt of the cities from Athens and, at the same time, build forts (*epiteichismos*) in the Athenian lands.

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<sup>455</sup> The Peloponnesians were able to make loans from the Panhellenic sanctuaries of Delphi and Olympia. This was connected with the influence that the Peloponnesians exercised at the sanctuaries at that time. The Delphic sanctuary was administered by the Delphic Amphictiony, but competition was exercised by the Greek states for influence on the sanctuary (see the Sacred wars). The Elians had control of the temple of Olympia and of the Olympic Games taking place there (Thuc.V 49). An inscription dated *ca.* 500 BC includes a law from Elis which regulates behaviour in the sanctuary at Olympia (*SEG* XXXI 362).

Moreover, Pericles agreed with this view of Peloponnesian warfare, but used it for disagreement (I 143). How then was the initial plan for changes and developments in the attitude of the Peloponnesians to war, a plan which was initiated by the Corinthians (who themselves were masters at naval affairs and had a monetized public economy as their coinage indicates) put into effect in the course of the war?

Before the actual outbreak of the war the Lacedaemonians asked their allies in Italy and Sicily to build five hundred warships and to gather money (II 7.2). During the Ionian War the Spartan king Agis collected tribute from Sparta's allies to finance the expenses of his navy (VIII 3). The Spartans started collecting money from their allies at the very moment when many of the allies of Athens revolted and thus Athens was gradually deprived of tribute money (Miletus (VIII 17), Chios (VIII 22-24), Byzantium (VIII 80), Euboea (VIII 95) and Eretria in 411 BC (ML 82)). Again the Spartans ordered their allies to build one hundred warships for the war in Ionia. Persian money enabled the Peloponnesians to maintain successfully the Ionian War (VIII 29, 45, 57, 83-4).<sup>456</sup> Athenian rule in the Aegean worked against the interests of the Persian satraps since they had difficulties in collecting the tribute of the cities in the region (VIII 5, 6). The financing of the Peloponnesian troops by Persian money resulted in a sequence of treaties between the Spartans and the Persian king (VIII 18, 37, 58). Thus the financial resources demanded for the war were gradually acquired by the Peloponnesians and, finally, were secured by Persian money. This affected diplomacy and, simultaneously, the balance of power in the Greek world.

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<sup>456</sup> It was only during the Ionian War that Persian interference in the Greek war became decisive. However, from the very beginning the Greek cities considered the help from the Persian king and from barbarian kings (II 7: Thracian) to be decisive for their fighting. For example, the decree with which Athens honours Heracleides of Clazomenae (ML 70) because 'he co-operated with the Athenians for the treaty with the King (II. 15-6) implies a treaty between Athens and the Persian king as early as in 424/3 (different dates have been proposed for the decree such as 415 and 389 BC).

We have already discussed the way in which the Syracusans during the war against the Athenians built their navy and developed some techniques in naval warfare (VII 7, 21, 36, 37, 56) which enabled them to defeat the Athenians. Similarly, the cities of the Peloponnesian League increased their naval power and also their warriors developed skills in sea warfare. Even from the first naval encounter between the Peloponnesians and the Athenians in the second year of the war (II 83-84), it becomes evident that the Lacedaemonians were concerned with naval affairs. Their defeat in their first encounter on the sea made them consider the reasons of their defeat. Thus they sent to the admiral Knemos three consultants for naval issues. The last book of the *History* gives a clear picture of the Peloponnesian navy which became equivalent to the Athenian (VIII 48.88). Also, at the moment the Spartans extended their military operations, new groups joined the hoplites army such as the *neodamodes*, as we have seen earlier. Moreover, honourable posts were given to non-Spartans.<sup>457</sup> Such changes reflect Sparta's success to adapt military techniques to the new war. The unfolding history of the Peloponnesian War proves that in the course of the war the Spartans and their allies gradually achieved the preparedness (*paraskeue*), which, according to Thucydides' concept of power, was indispensable for victory in war. Also, it proves that the traditional concept of power and success at war was no longer adequate for victory in the Peloponnesian War. Thus Thucydides, although he included traditional ideological patterns in his concept of power and military success, understood it principally as money and naval power.

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<sup>457</sup> See Cawkwell (1983) pp. 385-400.

## 10. Conclusions

(I) Thucydides made the economics of the Greek *poleis* pivotal factor in his narrative of the Peloponnesian War.

(II) The financial resources of the Greek cities and of the Athenian *arche*, in particular, defined the historian's perception of power.

(III) His narrative allows the introduction of parameters other than economics which decide the course of the Greek war, such as diplomacy, oracles, natural phenomena and their interpretation by humans, the human nature and the natural law, religion and the political endeavour of individuals. In Thucydides' narrative, irrational elements such as the full moon and the soothsayers' predictions often affected the motives and the action of an army (e.g. VII 48). Simultaneously, the traditional concept of *arete* and of the values, which brought success to war, found a place in Thucydides' history. For all these factors determined Greek warfare and, mainly, the attitude of the Greeks to war and victory at war. Thus Thucydides, in the course of his narrative, had to move from his sophisticated and advanced thesis that the *periousia chrematon* decides wars and to leave room for other factors decisive for the Peloponnesian War. This is in accordance with the fact that the gradual monetization of the Greek economy and Greek warfare did not simultaneously change the attitude of the Greeks towards traditional values.

(IV) In Thucydides' account of military conflicts and of the power of the belligerents we often find the concept of *hybris* which recalls Herodotus' pattern of historical

explanation and is in accordance with the historian's familiarity with fifth century tragedy. The power of the Athenian *arche* involved *hybris*. The wealth of the Corcyreans was so big that they reached *hybris* (I 38.5). Thucydides incorporated in his primary concept of power and military success elements derived from the ideological background of his era.

(V) Thucydides' history reveals the development in the practices which the cities employed to manage their economy in response to the exigencies of the Peloponnesian War rather than a development in the historian's understanding of economics.

(VI) In Thucydides' account of the *polis* fiscal policies, we find the concept of the vigorous *polis* which possesses financial resources and employs successful fiscal policies. Also, his concept of the economics of the Greek cities reflects the monetization of the *polis* economy, since many of the institutions of the Greek cities and Greek warfare relied on money.

(VII) Thucydides describes the financial resources of Athens but he does not give an account of how these resources were used by the state. The administration of the public finances and the mechanisms behind economic practices are absent from Thucydides' work.

(VIII) Thucydides is interested in liquid money and its importance for financing the Peloponnesian War but not in coinage. Money is used in his *History* in a rather abstract way. He does not refer to any specific coinage and to its characteristics.



Similarly, he describes the policies that the Athenians employed to overcome economic crises but he is silent about measures taken in Athens' mint (see chapter 2).

(IX) The Athenian *arche* is a main theme in Thucydides's *History*. Thucydides emphasizes the economic character of Athenian imperialism. However, economic measures that the Athenians took in order to secure their imperialistic interests are absent from the *History*. More specifically, there are significant omissions of Athenian decrees which regulated economic issues in the Empire. Thucydides, although he refers to the tribute as a financial resource of Athens and estimates the annual tribute revenue, is silent about the tribute system and the tribute assessments. He does not give the economic principles of the tributary system. Herodotus (VI 42.2) gives the basis of Artaphernes' tribute assessment, that is, the land possessed by each city. From Thucydides' account we can assume that the wealthy allies were assessed for large tribute but the tribute lists do not always explain the tribute paid by the cities by their economic prosperity. For instance, the tribute assessment of 425/4 BC was intended to produce an extraordinary increase of the tribute revenue. Thucydides does not mention this particular assessment, although he is concerned with the increase of Athens' revenues, especially at times of financial crisis (e.g. the *eisphora* tax).

The Athenian decree which imposed Athenian coinage, measures and weights on the allies is absent from Thucydides' account of the Athenian *arche*. All decrees related to Athenian imperialism had political and economic ends. The coinage decree had a strong economic character (see chapter 2). It aimed at the consolidation of Athenian economic interests in the Aegean and at the safeguarding of the coinage of Athens as an international currency. Such economic ends might have increase Athenian

revenues in ready cash at the time of the Peloponnesian War. But Thucydides, although he emphasizes the gradual depletion of the treasuries of Athens from cash in the course of the war, omits the Coinage Decree and its economic effects on Athenian economy during the Peloponnesian War.

(X) How can we explain Thucydides' omissions of Athenian decrees which were primarily concerned with the financial management of the empire? Thucydides understood the economic character of the Athenian *arche* and thus he gave the theoretical concept of Athenian imperialism as *periousia chrematon*. But he failed to give an account of the fiscal measures which the Athenian *demos* took to safeguard and strengthen the economic interests of Athens. A first hypothesis is that most of the economic decisions made by the Athenians did not serve the principles of the *History* because it foremost remained an account of a military conflict between the Greek cities and between two different political leagues, that is, the Peloponnesian and the Athenian League. A second hypothesis is that the provisions of many Athenian decrees were not put in effect and were not accepted by the cities of the Athenian *arche*. Thus Athenian decrees did not affect seriously the economy of the cities of Athenian empire and, in fact, did not accomplish the imperialistic aims of Athenian policies. For example, we argued in the second chapter that the cessation of civic coinage in certain cities of the *arche* was not the outcome of the prerequisites of the Coinage Decree. Cities ceased their coinage because they lacked the *raison d'être* of coinage. For this reason, the significance of some decrees, which handled economic issues, was different for Thucydides than it is for modern historians. In this way, Thucydides is silent about the Coinage Decree and tribute assessments.

(XI) In what way is Thucydides more informative than Herodotus about the economy of the Greek *poleis*? He undoubtedly kept the economics of the *poleis* central to his historical inquiry and to his narrative of the Peloponnesian War. Furthermore, he 'rescued' his perception of finances from the traditional view of the 'golden wealth' and its perils, which is found in Herodotus' work. Despite the influence that tragedy had on his history, Thucydides did not maintain the tragic concept of wealth that Herodotus maintained. He defined the wealth of cities and individuals mainly as possessions in coined money.

Furthermore, in his account, economic crises that the Greek *poleis* faced during the Peloponnesian War were because of lack of liquid money, of ready cash. In Herodotus *Historiae* the concept of power remains abstract and, simultaneously, static.<sup>458</sup> The power of the Persians is given in terms of their great military forces (VII 61-99, so great that, in Herodotus' style, rivers cannot supply them with water (VII 129.3)). Thus the size of an army is an important indicator of power. Also, the enormous wealth of the Great king is taken for granted and hence is not described in detail by Herodotus. Moreover, in Herodotus wealth is possession of gold (e.g. IX 80, 82-83, Aeschylus' *Persae* 1.9: '*polychrysos*' army).

Finally, Thucydides understood economics as such and did not 'embed' his understanding of the economics of the Greek *poleis* and of their warfare in the understanding of other phenomena, as Herodotus did. This was because changes in Greek warfare towards extensive use of money made the Greeks aware of the necessity of sophisticated economic practices and financial measures in order to

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<sup>458</sup> By saying 'static' I mean that Herodotus' account of the Persian wars did not make clear any swift from the initial power. The Persians, although defeated in the end, were not deprived from wealth and large numbers, the main elements of their power. See Immerwahr (1973) pp. 16-31.

maintain war and to overcome economic crisis caused by war. In this way, Thucydides stated that, according to the principles of war, money buys people and changes the course of history (VII 86.4).

(XII) How far can we reconstruct Greek economy from Thucydides' history of the Peloponnesian war? Thucydides' history is a valuable source for reconstructing the *polis* economy in the second half of the fifth century. We learn about the financial resources of states and individuals. We learn about the tribute revenue in the Athenian *arche*. Moreover, about taxes imposed on individuals and on states. We learn about the practice of leasing out public and private land. We learn about economic practices at war such as ransoming of prisoners, sale of booty, sale of captives as slaves. But from Thucydides' history we cannot reconstruct the ramifications of the Greek economy in the fifth century which is possible by the study of financial records (ch. 1) and by the study of Greek coinage (ch.2).

## CHAPTER SIX

### *Xenophon Hellenica I-II and the economics of the Peloponnesian War*

#### 1. Introduction

In the previous chapter we dealt with Thucydides' narrative of the Peloponnesian War and the historian's understanding of the importance of economics for the course of the war. The sudden breaking of Thucydides' history left the narrative of the last stage of the Peloponnesian War in the hands of Xenophon, who in the first two books of his *Hellenica* assumed the task of narrating the Peloponnesian War until its end. Therefore the importance of economics to the Peloponnesian War will be analysed with reference to Xenophon's historical narrative and his understanding of economics.

In this chapter first we discuss Xenophon's understanding of the economics of the Peloponnesian War. Second, we discuss Xenophon's view of Lysander and his role in the economic policy of Sparta. Finally, the historian's view of the Spartan *arche*. We address the following questions. First, to what extent does Xenophon's account of the war embrace economic factors and illuminate their importance to the Greek fighting? Second, does Xenophon's narrative support the idea that changes in the economic practices of the cities regarding their warfare decided the Peloponnesian War in the way that Thucydides' narrative made clear? Third, does Xenophon's view of the economics of the war add anything new on Thucydides' concept of economic factors as decisive for the Peloponnesian War?

## 2. Athenian financing of the last years of the Peloponnesian War

The opening lines of the *Hellenica* present the Athenians and the Spartans engaged in naval warfare in the region of the Hellespont. The Persian satrap Pharnabazus was directly involved in the Greek fighting. This is a continuation of Thucydides' introduction of the role of the Persians in the Greek war. The Athenians employed certain means in order to retrieve money to finance their fighting (I 1.19-22). They continued the practice of *argyrologein* (II. 8, 13), that is, the collection of money in the region. In the course of the war the practice of *argyrologein* became a task performed by the generals and a direct way of financing military operations.

The Athenians on Alcibiades' initiative obtained a good amount of money from the Cyziceans and the Selymbrians. On what grounds did the cities of Cyzicus and Selymbria provide the Athenian army with money? First, both cities were members of the Delian League and thus tributary to Athens. According to the *ATL*, the tribute paid by the cities ranged from 4 T to 9 T. Only for the years 434, 432, 431 BC the tribute paid by the Selymbrians had fallen to 900 dr. Second, Athens was for most of the time on good terms with the cities in the Hellespont because a great volume of grain-importation into Athens was conducted from the area of the Bosphorus. Many honorary decrees for people from the Bosphorus, who facilitated the grain trade for Athenian merchants, have survived from the fourth century (e.g. Isocr. 17.57: Athens' relationship with the king Satyrus, honorary decree of Leucon and his sons and honorary decree of Sosis and Pairisades (*IG* II<sup>2</sup> 212)).<sup>459</sup> Certain treaties were

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<sup>459</sup> The bulk of the Athenian decrees, which honour people from the wide area of the Hellespont, come from the fourth century. However, Athens had built up a network of diplomatic and economic relations with the cities in the area from an early time, since the safeguarding of corn-supplies from the Hellespont was always vital for Athens. See, e.g. Pericles' expedition to the Chersonesus and the

concluded between Athens and cities in the region. For example, the treaty between Athens and Selymbria in 407 BC (Fornara 162) at the time when the Peloponnesian War was fought in the Hellespont. Athens' alliances with cities in the area therefore facilitated the provisioning of the Athenian army. Third, the cities in the region enjoyed prosperity, especially Cyzicus, the coinage of which won a great credibility and wide circulation throughout antiquity.

The Athenians also tried to retrieve money to finance their military undertakings in the Hellespont by establishing a custom house (*dekateuterion*) in Chrysopolis in order to collect a tithe-duty from vessels sailing out of the Pontus (1. 22) (see ch. 1).

Xenophon devotes part of his narrative to the activities of the Athenian Thrasyllus in Asia Minor (I 2.1-10). Describing the activities of the Athenian army (I 2.5), the historian offers a detailed account of how an army procures its supplies, that is, by raiding the enemy's territory, the army seizes money, slaves and booty.

In the year 408 BC the Hellespont was still the theatre of the Greek fighting. The Athenians besieged Chalcedon and Byzantium (I 3.1-22). Xenophon's narrative underlines aspects of the fighting which are valuable for understanding the economic exigencies of the war. The Chalcedonians faced with the Athenian siege, entrusted their portable property to the Bithynians. The whole episode bears a flavour of

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Euxine (Plut. *Per.* 19, 20) and the settlement of 1,000 Athenian cleruchs in the Chersonesus. Moreover, Athens attempted colonisation in the area, e.g. Astacus (Diod. 12.34.5) and Amisus, the fourth century coinage of which bears the Athenian owl and the name Piraeus. A fifth century decree regulating Athens' relations with Methone and Macedon provides evidence that Athenian officers, *hellespontophylakes*, controlled the shipping through the Hellespont (ML 65=Fornara 128, ll. 39-40). Possibly the establishment of special officers at the key-point on the corn-route was a war-measure (ML p. 180).

anecdote such as the many included in [Aristotle] *Oeconomica*. However, it is not unlikely that it is a reference to liquid assets in coined money.<sup>460</sup>

The treaty that the Athenians concluded with Pharnabazus provided the Athenians with 20 T. In addition, Alcibiades collected 100 T from Caria (I 4.8). From Xenophon's narrative we cannot calculate precisely the sums of money possessed by the Athenian generals in the Hellespont but it might have been quite large.

Two observations seem worth noting. First, as we have seen earlier, the public treasury of Athens suffered a lot after the Sicilian expedition but, on the above evidence, it seems that other resources than those derived from the *polis* treasuries were available to the belligerents in order to finance the war. We discussed in the first chapter that some of the money collected by the Athenian army might have reached the treasuries of the city recorded as public finances. Second, the Athenian generals could possibly have financed their military enterprise in the region from the money collected in lieu but this does not exclude the possibility that additional funds from Athens' treasury were required (we noted above that the cost of many military enterprises varied from a few Talents to very large amounts, e.g., 50 T for the expenses of the Athenian squadron sent to Corcyra in 433 BC (ML 61) and 1,400 T for the expenses of the Samian War in 440-439 BC (ML 55)).

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<sup>460</sup> Additionally, what the citizens of Chalcedon left with their neighbours was cattle and slaves. Aeneas Tacticus *On the defence* 10 refers to such a situation.



### 3. Sparta's financing of the last years of the Peloponnesian War

When the operations started in the area of the Hellespont, the Lacedaemonians faced severe difficulties. However, Pharnabazus provided the Spartan army with subsistence for two months, he armed the sailors and ordered the building of triremes at Antandrus providing the money and the timber for this purpose (I 1.23-26).

The war proceeds to a decisive phase at the time when Cyrus became the ruler of the peoples on the coast and supporter of the Lacedaemonians (I 4.3), Alcibiades was elected general (4.13) and conducted a lavish return to Athens (I 4.13-21) and the Lacedaemonian Lysander was sent out to the Aegean as admiral (I 5.1). Lysander entered the scene of Greek fighting when he achieved the financial support of Cyrus for the Spartan army. Cyrus provided Lysander with 500 T and with the promise that his personal fortune would be available to the Spartan army (Plut. *Lys.* 4.4: 10,000 darics). Also, the wage of the sailors was increased from 3 to 4 obols per day. Moreover, Lysander secured the wages of one month in advance. In the light of Lysander's achievement, it becomes clear that the Greek war was, to a considerable degree, financed by Persian money.<sup>461</sup> Can we regard this fact as an indicator that the war and its conclusion is no longer a matter of the financial resources of the Greek cities and of their economic policies but a matter of good diplomacy, which made the Persian money available to the fighting alliances? The unfolding narrative of Xenophon offers an answer.

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<sup>461</sup> In the years after the war, the view that the Spartans won the war because of the Persian money was established. Pharnabazus in his speech to Agesilaus (*Hell.* IV 1.32) pointed out that the Spartans built their navy because of the Persian money. The Theban envoys at Athens used the same argument (*Hell.* III 5.13).

Lysander succeeded not only in financial matters but in military encounters. He was the victor at the naval battle at Notium. This battle ended Alcibiades' career as an Athenian general.<sup>462</sup> The battle of Notium was important since the Spartans began to understand naval matters and to confront the Athenians successfully at sea (I 6.4-5, *Hell. Oxyr.* Florence Fr. B, Col. 2, Diod. XIII 71-4). However, the battle did not receive detailed elaboration from Xenophon. As it has often been noted Xenophon is silent about Lysander's successful entry into the war while Pausanias regards the victory at Notium as an example of Lysander's wisdom.<sup>463</sup>

Money became the main concern of the Spartan army at the time when Callicratidas replaced Lysander in office. Despite the fact that Xenophon's narrative stresses the traditional merits of a Lacedaemonian leader who out of pride dismisses dependence on the barbarians' financial aid, the need of money for fighting the war is stressed in Callicratidas' speech (I 6.8-11, *Plut. Lys.* 6.4-7).<sup>464</sup> The money acquired by Lysander was given back to Cyrus as unneeded surplus (*Plut. Lys.* 6.1). Thus the financing of the Spartan army in Asia Minor relied on the money asked to be brought from Sparta itself and on contributions in lieu. The Milesians granted some money to Callicratidas, part of which consisted of contributions of individuals. Contributions by individual to war funds were a common practice. In 427 BC certain individual contributed to the

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<sup>462</sup> Alcibiades was deposed by the Athenians as general in the Hellespont although he possessed all the qualities of a great commander. In Plutarch's words his conduct as an Athenian statesman was based on 'his voluntary contributions of money, his support of public exhibitions, the glory of his ancestry, the power of his eloquence, the comeliness and vigour of his person and his experience and prowess in war' (*Alc.* 16.3).

<sup>463</sup> See Andrewes (1982) pp. 15-25, Westlake (1969) pp. 203-225.

<sup>464</sup> Xenophon's portrait of Callicratidas is that of the ideal Spartan. Callicratidas' denial of the Persian money was a noble denial of the necessity of money and of its use. See Diodorus XIII 76.3. If Xenophon's portrait of the Spartan commander was built up on the actual conduct of certain Spartan leaders, then it becomes clear why the Spartans failed to use effectively the Persian money available to them from the very beginning. See Proietti (1987) ch. 2.

Spartan war fund, (ML 67, ll, 6, 8-12).<sup>465</sup> Later in 355-1 BC during the Sacred War individuals made contributions to the funds (Tod 160 l. 15). Also, the *eisphora* of the Athenians was intended for the financing of the war.

Callicratidas received from Chios a payment of five drachmae apiece (*pentedrachmian*) for his seamen (I 6.12). The amount of five drachms for each sailor is problematic.<sup>466</sup> If the wage of each sailor was 4 obols per day, then to what payment does the amount of 5 dr. correspond? What was the total amount given by the Chians? Apparently, the term *pentedrachmian* does not refer to a particular denomination of the Chian coinage. Probably it refers to a fixed amount of money given to the Spartans in order for the needs of sailors to be met. Xenophon did not give the total amount of money since it depended on the number of sailors who at that moment constituted the naval force of Callicratidas. Later in the narrative the Spartan naval force is given as one hundred and seventy triremes. The crew of each trireme was about two hundred men. If we assume that the increase of the sailors' wage did not take place immediately, especially since Lysander was out of office, then the amount of 5 dr. was to cover ten days' wages for each sailor. Thus the total amount of the Chians would be something like 170,000 dr. = 28 T, a relatively large figure explicable only by reference to the island's prosperity.<sup>467</sup> Additionally, Cyrus' money was still a source for the financing of the Spartan navy (I 6.18).

After his account of the Spartans' resources, the historian narrates the naval battle of Arginusae where the Athenians under the command of Conon were victorious (I 6.29-

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<sup>465</sup> See Loomis (1992) pp. 7-81.

<sup>466</sup> Thompson (1971) pp. 323-324.

<sup>467</sup> The payment to sailors in Chian coins shows that acceptability was established for the coinage of Chios. In Thucydides (VIII 101.1) there is a reference to a payment of three Chian fortieths.

36 and Diod. XIII 102.4: the greatest naval battle that had ever taken place of Greeks against Greeks). The victory of the Athenians was because of the large number of triremes they possessed and because they were the choicest troops they had ever gathered (Diod. XIII 99.1).<sup>468</sup> Not only citizens but also slaves were recruited to man the ships. Moreover, *hippeis* were on service (I 6.24). From Diodorus (XIII 97.1) we get the information that the Athenians in order to overcome the recent reverses 'conferred citizenship upon the metics and any other alien who were willing to fight with them'. The Peloponnesian War affected the structure of Athenian society. The number of the Athenian citizens was reduced because of the war casualties. However, changes in regard to citizenship occurred, since public and military services were connected with citizenship. Thus if metics and certain aliens were enrolled on Athenian citizen registers, they would enjoy citizen rights and would perform new duties appropriate to citizens and would be liable to citizen taxes (probably they were awarded *isoteleia*).<sup>469</sup> In this instance, the exigencies of war in manpower caused a high degree of mobilisation within the Athenian populace and thus changes in the class system. Such changes would affect the tax system and the public finance of the city (i.e., exemption from the payment of the *metoikion*).

After the defeat at Arginusae, the Lacedaemonian army was found on the island of Chios. In the narrative we are told that the army lacked subsistence (II 1.1). The

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<sup>468</sup> In 407/6 BC the Athenians had ordered the building and manning of ships in Macedon (ML 91). On the evidence of the Athenian decree we cannot assume that the triremes built in Macedon furnished Conon's armada. According to a restoration in line 19, the triremes were to be brought to Ionia. But both the decree and the historical account of Conon's large fleet confirm the effort of the Athenians to rebuild their fleet after the Sicilian defeat. The concern of the Athenians with the maintenance of their fleet becomes evident from the naval law of 410-404 BC, according to which the trierarch was entitled to use any means to retrieve the equipment of the ship (*IG I<sup>3</sup> 236*).

<sup>469</sup> For instance, after Athens' liberation from the Thirty tyrants the metics, who supported democracy, were rewarded in 401/0 BC (Tod 100=Rhodes-Osborne 4, Aesch. 3.187-90). According to Archinus' proposal, the metics who fought at Phyle and their descendants were rewarded Athenian citizenship (II. 4-7). As for those who fought at Munichia and assisted the Athenians were granted *isoteleia*, *epigamia* and *engyueses* (II. 7-9).

Spartan army secured its provisions by consuming the agricultural production and working as hired workers in the fields during the summer.<sup>470</sup> This piece of information is valuable for reconstructing the sources on which the Greek armies relied. At the time of harvest additional working force was required. The majority of soldiers were farmers themselves and thus they were hired as an extra working force by the local communities. We can hardly speculate on their wage. There is no evidence of wages for agricultural workers. The wage could not exceed 4 obols per day on the evidence of 4 obols pay per diem for Timon as a farmer worker (Lucian *Tim.* 6, 12).<sup>471</sup>

It is interesting to consider the amount of hired labour that was required at the time of harvest. The usual view is not much because landed property was fragmentary in most of the Greek cities. Also, non-monetary co-operation between kinsmen and neighbours may provide labour force at harvest time.<sup>472</sup> Does the above evidence challenge the usual view? In my view, in some cities a considerable number of hired labours was required for agriculture because of high agricultural production (e.g. high production of grain) or because of a specialized crop cultivation (e.g. cultivation of vines). Agriculture in Chios demanded a large labour force as is attested by the extensive use of slaves in farming, despite the usual assumption that small numbers of slaves were used in farming.<sup>473</sup> The high wine production of the island may explain the need for slave or hired labour in agriculture.<sup>474</sup>

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<sup>470</sup> A very early instance of an army engaged in farming is given by Thucydides with reference to the Greek siege of Troy (I.11).

<sup>471</sup> Loomis (1998) p. 105.

<sup>472</sup> See Osborne (1985) pp. 142-146.

<sup>473</sup> The great number of slaves on the island of Chios is attested by the only recorded revolt of slaves in a Greek city, which occurred on Chios (Athen. 265c-266f). See Fisher (1993) pp. 83-84.

<sup>474</sup> The wine of Chios was of high quality and a large-scale trade of wine was in operation (Athenaeus 426E, Hermippus fr 82K). Finds of Chian amphorae in the Athenian Agora, in Corinth, in South Russia and in Naukratis show the wide exportation of Chian wine.

When Lysander returned to action (II 1.8), his first concern was to retrieve money from Cyrus and to secure the sailors' wages (II 1.11-12). The expenses of maintaining a large naval force as that of the Peloponnesians in Asia Minor were very high. In the fourth century Demosthenes (4.22) estimates the monthly expenses for the rations (*siteresion*) of a modest force as 92 T. The navy under Lysander's command became active only when Cyrus provided the money in order for many triremes to be manned. Hence Lysander captured the city of Lampsacus and his soldiers plundered the city which enjoyed great prosperity (II 1.19, Diod. XIII 104.4 and [Ar.] *Oecon.* 1347a).

#### **4. The battle of Aigospotamoi**

The final naval encounter of the Peloponnesian War took place at Aigospotamoi. The Peloponnesian army under Lysander's command defeated the Athenians under the command of Conon, who fled with eight ships to Euagoras of Cyprus (II 1.21-30). Lysander's splendid triumph was commemorated by the dedication of a large group of statues at Delphi (Paus. X 9.7-10).<sup>475</sup> The victory of the Spartans at Aigospotamoi terminated the Peloponnesian War. Despite the significance of the battle at Aigospotamoi, Xenophon's narrative is very condensed.<sup>476</sup>

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<sup>475</sup> Epigrams were inscribed on the monument probably at a later period (ML 95). In this way, the Spartan victory at Aigospotamoi was placed in the tradition of the Greek victory over the barbarians in the Persian Wars. In fact, it was the freedom of the Greeks which was achieved at the end of the Persian wars and, likewise, at the end of the Peloponnesian War. According to Xenophon (II 23), the fall of Athens was welcome by all the Greek cities as the beginning of their freedom (also, Plut. *Lys.* 14.4).

<sup>476</sup> He focused on the Athenians' reaction to the news of their defeat (2.3). His account contains the tragic elements found in Herodotus' account of the defeat of the Persian fleet at Salamis (VIII 99) and Thucydides' account of the Athenian defeat at Syracuse (VIII 1). In this part of Xenophon's narrative the tragic scheme of divine retribution and reversal of human affairs is uppermost. It has been held that the *Hellenica* as a whole operated the tragic concept of divine retribution and reversal of power. See Higgins (1977) ch. 6.

We hear from Xenophon that the Athenians lost the battle because of tactical mistakes. In Xenophon's account it seems that the Athenians were not defeated because of lack of financial resources. The Athenian *demos* passed a decree before the naval battle at Aegospotamoi where they decided the way in which their defeated enemies should be punished.<sup>477</sup> The decree as such is not an indicator of the political and financial situation in Athens since it is, mostly, related to the political institutions of the city. However, did the Athenians possess enough power at that time in order to envisage their victory over the Peloponnesians? To a degree, yes. According to Xenophon, the Athenians under Conon's leadership possessed a fleet consisting of many triremes. On this evidence, we can say that Athens afforded the money needed to build triremes and to man them. We have already argued that despite the blow of the Sicilian expedition and the use of the reserve money the treasury of Athens recovered for the time being. Hence Athens was able to continue the war successfully for many years after. Moreover, tribute collection or, basically, money collection from the subject cities was still at work. Many cities in the region of the Hellespont were Athens' allies and thus they supplied the provisions of the Athenian army. So Xenophon's account of the final battle does not support any assumption that Athens was defeated because of lack of money. Moreover, the account of the battle reveals that Xenophon's history of the Peloponnesian War was mainly a military history.

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<sup>477</sup> Such decrees resolved by the Athenians might have been seen as an indicator of the nature of Athenian democracy and of the arrogance of the powerful Athenian *demos* at the time of the Athenian *arche*. Aristophanes (*Birds* ll. 1035-1057) offers a parody of the procedure of passing decrees. The decree-seller (*psephismatopoles*) is referring to certain Athenian decrees such as the decree concerning penalties for anyone who kills an Athenian in any city of the *arche*, the Coinage Decree and the decree concerning the reception of Athenian officials into the cities.

## 5. Sparta's victory and the effects on its finances

Lysander after his victory brought to Sparta the crowns he received as gifts from many cities (*Hell.* II 3. 8, *Plut. Lys.* 16.1). The gold and silver brought to Sparta was acquired by the public treasury (Athenaeus VI 24 quoting Posidonius).<sup>478</sup> Additionally, he brought 470 T, which came from tribute money paid to Cyrus and bestowed to Lysander (II 3. 8, also *Diod.* XIII 106.8: 1,500 T). In Xenophon's context it seems that the 470 T were what remained from the tribute money that Cyrus assigned to Lysander in a sequence of years: περιεγένοντο (τῶν φόρων). But the given amount of 470 T perfectly fits an annual tribute payment. We know that the Greek cities of Ionia were tributary to Persia (*Xen. Hell.* III 4.25: *archaios dasmos*) and, according to Darius assessment, the tribute was 466 T.<sup>479</sup> The amount of 470 T given by Xenophon is also in accordance with the total tribute roughly received annually by the Athenians. Thus this particular amount seems to represent an annual tribute payment, probably, the tribute paid by the Ionian cities. If this is the case, then Diodorus' 1,500 T probably represent an amount of tribute money paid in the span of three years.

But still remains the question whether this money was the tribute payment destined to the Great King's chest or was tribute paid to the satrap, that is, to Cyrus by his satrapy? In my view, it is more possible that the money given to Lysander derived

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<sup>478</sup> This was 'the reason for many evils', a comment on the basis of the well established view of the role of money in classical Sparta.

<sup>479</sup> It has been argued that the Greek cities of Asia Minor paid tribute simultaneously both to Athens and to Persia. There is a parallel with the cities in Thrace, which paid tribute simultaneously to Athens and to the Thracian kings (*Thuc.* II 91.3, *Tod* 151). It might be to the advantage of certain cities (or to powerful individuals) to safeguard themselves by paying tribute to both sides. See Murray (1966) pp. 142-156. According to the assessment of 425/4 BC, the tribute from the district of Ionia-Caria was assessed at 234 T, half of the assessed 466 T tribute payment by Darius. The Greek cities in Ionia at the time of their independence from the Persian rule paid tribute to Athens. This affected the royal revenue from the satrapy of Ionia. The tribute received from the area may have been half of the assessed 466 T.



from the tribute paid to Cyrus from his province. The independent role of satraps in Greek warfare is well attested, especially at the time when Persian diplomacy towards the Greeks was exercised by means of money (see ch. 3). For instance, later the Persian satrap Tithraustes gave the amount of 50 T to the Rhodian Timocrates in order to persuade the leaders of various cities to make war against the Spartans (Xen. *Hell.* III 5.2).

## **6. The economics of the Peloponnesian War according to Xenophon**

What was the picture of the economics of the war that Xenophon's narrative leaves us with?

Xenophon's narrative is sparing in the number of events which he includes in his narrative, which is mostly a report of the military encounters taking place during the last years of the war. The bulk of his narrative concentrated on naval fighting between the Athenians and the Peloponnesians. There is no report of the procedure of decision-making in the Greek cities. His narrative lacks the vivid contrast between supporters of different policies concerning civic institutions and warfare which is such a feature of Thucydides' history. With the exception of the trial of the Athenian generals after the naval battle at Arginusae (I 7) and the regime of the Thirty and the restoration of democracy (II 3, 4) which concern the internal politics of Athens, Xenophon was mainly interested in Greek warfare as such. His history bears mainly the character of a military report.<sup>480</sup> Even as a report of military events Xenophon's narrative recognised

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<sup>480</sup> The *Hellenica* has been seriously questioned as history and Xenophon as a historian has been neglected by modern historians, most notoriously by Finley (*Greek Historians* p. 19). He has been regarded rather as a historical novelist than as a historian. See Henry (1966), C.H.Grayson (1975) pp. 31-43. But Xenophon's work was praised in antiquity (e.g., Dionysius of Halicarnassus *Epist. ad*

that the parameter of money was very important for the military operations of the Greeks.

For in the first two books of the *Hellenica* the main concern of Xenophon was with the leaders' preoccupation to secure the provisions of their army. The historian cautiously provided his reader with evidence of the financial resources of the Greek armies. Moreover, Xenophon's account of the battles did not stress the importance of martial qualities such as *andreia* or order for their outcome but pointed out that the money which was available to an army defined, to a great degree, its success in the battlefield. But he did not dismiss entirely the importance of military tactics. The picture Xenophon left his readers with is that in the last years of the Peloponnesian War Greek warfare was conducted by sea and that was entirely dependent on money demanded for the maintenance of the fleet and the payment of the sailors. So we can grant Xenophon a good understanding of the economics of Greek warfare in the end of the fifth century.

However, Xenophon did not offer any account of how the high expenses of the naval warfare affected the *polis* economy. Furthermore, his narrative did not deal with how the *polis* organised its finance in order to meet successfully the needs of the war. Although, there is a reference to the *polis* treasury, there is no any particular mention to the way in which the public money financed the war. Most of the practices, employed by the belligerents to finance their military undertakings, which are described by Xenophon, referred to a direct acquisition of financial resources au lieu. Undoubtedly, most of the economic practices employed by the armies reflect well-

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*Pompeium* IV, *De Compos.* 10, Diogenes Laertius 2.6.54). Most of the ancient criticism of Xenophon's work was based on the literary merits of its composition and thus for many centuries Xenophon's work was very popular among readers and scholars while Thucydides was disdained.

established practices within the cities, e.g. the 10% tax at harbours. But Xenophon's history was focused on the economics of warfare as such, not on the *polis* economy.

Xenophon's narrative of the war showed that the Spartans employed an effective policy in order to secure money for the maintenance of their fleet, for building new triremes and for the payment of the sailors serving in the Peloponnesian navy. This successful policy functioned at two levels. The first was economic. The Spartans made use of all financial resources available to a Greek city at war, that is, money from the state treasury, money from the allied cities and contributions of individuals. Moreover, warfare itself created financial resources through plundering and booty and agricultural work.

The second was political. Spartan diplomacy succeeded in securing Persian support and thus Persian money.<sup>481</sup> The end of Spartan diplomacy in the last years of the war was financial. Also, the Spartans appointed the best of their leaders, namely Lysander, to exercise war politics and diplomacy displaying therefore an outstanding ability to adapt to the exigencies of the war when the Athenians deprived the best of their commanders, that is, Alcibiades, of military and political power. According to Thucydides, the new politicians at Athens did not follow an advantageous policy and their political conduct led to the defeat of Athens. In essence, the Spartan victory was certain, according to Thucydides' concept of the war and its likely outcome.

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<sup>481</sup> The Spartans in the last years of the Peloponnesian war carried out immense diplomatic and military activity in many areas, and this increased after their victory at Aigospotamoi. We meet Spartans in the North (Plut. *Lys.* 16, 20), in central Greece (Diod. 38.3-4), in Thessaly (Diod. 14.82.6, Herodes *Peri Politeias*), in Sicily (Plut. *Lys.* 2.5). In 396 BC Spartan ambassadors were sent to Nephereus, the king of Egypt, who gave the Spartans 100 triremes and 500,000 measures of grain (Diod. 14.79.4). Also, Asia became the main theatre of Spartan activity.

From Xenophon's account of the war it emerges that what the Spartans succeed in accomplishing during the war was to build a navy and to develop tactics of successful naval warfare. The Spartan admirals became capable of dealing with maritime affairs (see Callicratidas' speech). Although the Spartans were not masters of the sea, as the Athenians were, they displayed an ability to manage the different contingents of which the Peloponnesian fleet consisted. The Spartan army of hoplites was engaged successfully in naval encounters. The Peloponnesian army under the leadership of the Spartans was subjected to the new principles which originated in the course of the Peloponnesian War, that is, pay for military service. Thus in the last years of the war the main concern of the Spartan military policy was the war finance as is clearly pointed out in Xenophon's history.

In Xenophon's account of the Peloponnesian War there is no evidence that in the last years of the war Athens did not possess the means to maintain the war. The Athenians successfully acquired money from the cities in the Hellespont. They received tribute or else money payments from their allies and also Persian money. They maintained substantial naval forces until their ultimate defeat. Xenophon's narrative did not deprive the Athenian power of the elements of money and navy. Xenophon did not offer any reasoning on Athens' final defeat as lack of financial resources and a navy. What emerges from Xenophon's history is that Sparta was more successful than Athens in securing financial resources and, mostly, Persian money during the last years of the war.

A great deal of the money used by the Spartans and the Athenians to finance their war was Persian money. The picture which derives from Xenophon is that in the end both

belligerents and especially the Spartans relied on Persian money. Why did the historian emphasise the role of the Persian money? In my view, the historian's account overestimated the role of the Persian money in the last years of the war. The evidence of hoards of Persian darics found in Greece did not correspond to the picture of the use of Persian money which emerges from historiography (see ch. 3). In addition, we can assume that some of the amounts recorded in our sources, had never been received and some of them were misused by individuals, since the transactions between Greeks and Persians in the field of warfare were operated by individuals.

If we accept that the Persian darics played a significant role (but, in my view, not the ultimate role) in the finances of the Greek wars, can we say that they furthermore affected the financial resources of the Greek cities? Any extensive use of Persian money for financing the war did not entirely change the *polis* management of the public finances. In Thucydides' and Xenophon's histories we can see how the financial resources of the cities, engaged in the Peloponnesian War, and especially of Athens, were exhausted in the course of the war. Also, the financial records of the treasuries of Athens reveal that they were gradually depleted because of the high expenses of the war while certain changes in the administration of the public finance occurred (Ch. 1). It was mainly the ideological perception of the Persian wealth by the Greeks, which made Persian money the most important factor in the Greek wars from the end of the Peloponnesian War onwards, according to Greek authors. This view represents mostly the long-established ideology that the financial resources of the empire were abundant. Also, it reflects common beliefs that Persian wealth corrupted Greek cities and individuals. Thus Xenophon's emphasis on Persian money, undoubtedly, reflects the dependence of the finances of Greek warfare on Persian

money, but it does not necessarily mean that Persian money entirely replaced the *polis* resources for financing war.

Similarly, according to Greek historians, the influx of Persian money into the Greek world after the Peloponnesian War assisted in the resurrection of the economy of the Greek *poleis*. In my view, the role of Persian money in the post-war economy of the Greek *poleis*, in particular, of Sparta and Athens, is overstressed in historiography.

Let us begin with Sparta. It is reasonable to say that the end of the Peloponnesian war affected the economy of victorious Sparta. The money brought by Lysander after the Spartan victory over the Athenians was reserved in the treasury of the city. But we cannot assume that the money brought into Sparta after its great victory was much different from the established principles of Greek warfare. From Diodorus' account of the endeavour of the Spartan Gylippus after the Aigospotamoi (XIII 106.8-9) it emerges that what was intended to be brought into Sparta was booty and fifteen hundred talents of silver (Plut. *Lys.* 17: the silver was deposited in bags, each of which contained a *skytale* and thus it is likely that it was in the form of coined money). From the above passage, we can argue that the wealth, which was to be brought to Sparta, was the customary wealth after great battles and great victories, that is, booty (the Spartan booty consisted of various objects and silver in coined money).

In addition, the Spartans after their victory in the Peloponnesian War attempted to establish their hegemony through many policies. For instance, according to a decree (Tod 99) the victorious Spartans deprived the Delians of their autonomy, their sanctuaries and their sacred funds. In this respect, we can argue that the sacred funds

of the temple of Apollo in Delos became a financial source for the post-war Spartan public treasury. Thus we can conclude that Persian money was not the only factor for the augmentation of the economic resources of Sparta in the post-war era. The well established in the Greek world financial resources of the *polis*, that is, booty and sacred funds used for secular objectives, were the financial resources of Sparta in the post-war era.

To what extent did Persian money assist in the resurgence of the economy of Athens in the post-war era? In the post-war era, when Athens lost its *arche* and thus its imperial revenues, the financial resources of Athens were mainly based on income from agricultural production and from maritime trade. Athens had to restore its navy (reduced to a few triremes after the war, Xen. *Hell.* II 2.20, Plut. *Lys.* 15.1). Conon provided the base for Athens' fleet, when he sailed into the Piraeus with 80 triremes in 393 BC (Diod. XIV 85.2). He brought with him considerable resources in the form of money and man power (Xen. *Hell.* IV 8.9.10, Philochorus *FGrH* 328 frs 40, 146, Dem. 20.68, *Hell. Oxyr.* 9.2-3, 15.1-3, 19.1-3). But Conon served as an admiral of the Persians and thus the restoration of the Athenian navy after the war relied on Persian gold, as becomes clear from the historians' account of Conon's activities. So Persian money affected the financial resources of Athens in the post-war era. However, a sequence of policies about the increase of the *polis* revenues played a considerable role in the resurgence of Athens' economy. For instance, the imposition of the tithe on sea traffic, taxes imposed on trade, the reopen of the silver mines of Laureion and the increasing contributions of the well-to-do citizens to state expenses. In fact, the Athenians undertook a sequence of economic policies and reforms which led to the reorganisation of the Athenian finances later in the fourth century in 378/7 (Polyb. II

62. 7: valuation of the whole land of Attica, Harpocration s.v. *symmoria*, Photius *Lexicon* s.v. *naukraria*: tax-paying groups).

Persian money therefore contributed to the financial resources of Sparta and Athens after the Peloponnesian War. However, the Persian darics did not prove to be the decisive factor for the economic policies, which the cities employed and for the changes taking place in the economy of the post-war Greek *poleis*, to the extent that Greek historians pointed out.

Xenophon did not offer to his readers a theoretical scheme of the rationale of the Peloponnesian war either through his authorial voice or through the voice of the protagonists of his history. His narrative itself however justified Thucydides' concept of power and success at war. The Peloponnesian War narrated by Thucydides and Xenophon respectively brought to the fore changes in the Greek world since naval power and finances became the main aspects of Greek warfare. Thus there is a unity between the two *Histories* of the same war despite the fact that it is unlikely that there was any intentional continuation of Thucydides' concept of the war on the part of Xenophon.<sup>482</sup>

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<sup>482</sup> An issue raised about the *Hellenica* is whether Xenophon's work was an intentional continuation of Thucydides' history. The abrupt beginning of the *Hellenica* (*meta de tauta*), the chronological division and a certain accuracy and austerity found in the first two books of the *Hellenica* as inherited qualities from Thucydides, despite the fact that Xenophon's narrative was often the outcome of personal selection (e.g. IV 8.1), have widely been discussed as evidence of intended continuation of Thucydides' unfinished work. A continuation is clearly stated by Theopompus (115 FGrH fr. 5) and Diodorus (XIV 84.7). But such a continuation was to be found in an established tradition (see e.g. *Hell.* VII 27). The *Hellenica Oxyrhynchia* was a similar continuation of the work of Thucydides. Although this work bears many of the high qualities of Thucydidean historical inquiry and analysis, there is not enough evidence to support the assumption that it was an intentional continuation of Thucydides in terms of the methods of his history and of his style. Xenophon possibly knew Thucydides' work. According to Diogenes Laertius (II 57), Xenophon himself published Thucydides' work. In my view, the first two books of Xenophon's *Hellenica* stand for an intentional continuation of Thucydides' history only as for the subject-matter which is the account of the last years of the Peloponnesian War.



## 7. Xenophon on Lysander and on the Spartan *arche*

This proposed scheme of adaptability and evolution detectable in Sparta's military policy and diplomacy during the Peloponnesian War was embodied in Lysander's policies. His practices proved effective for Sparta to win the war and to establish its *arche* in the Greek world in the years after the war. But what was Xenophon's account of Lysander and of his policy towards the establishment of the Spartan *arche*? Moreover, what was the historian's view of the Spartan *arche*?

In the first two books of the *Hellenica* Xenophon described the activities of Lysander as the Spartan admiral in Asia Minor and as the victor of Aigospotamoi. Again, a brief account of Lysander's action in Asia Minor is found in the third book. Xenophon underlined the popularity that Lysander enjoyed among the Greek cities in Asia Minor and makes it clear that it was the reason for the quarrel with the king Agesilaus since his popularity put the king in the shade (*Hell.* III 4.7-9). In Xenophon's history Lysander is mentioned for his command in the Hellespont ~~and of~~ his success in persuading Spithridates to revolt from Pharnabazus (III 4.10). Also, his role in the Spartan expedition against Thebes is described (III 5.7). Lysander met his death at the battle of the Spartans against Thebes in 395 BC (III 5.17-19). This is Xenophon's account of Lysander.

The historian did not elaborate his account of Lysander by giving him a speech. Moreover, he did not praise Lysander for his successful conduct of the war nor even as the victor of Aigospotamoi. The usual view is that Xenophon failed to give a full

account of Lysander's qualities and of his importance to the outcome of the Peloponnesian War and, to some extent, to the building of the Spartan *arche*.

Did Xenophon fail to appreciate Lysander because, despite his emphasis on the importance of financial resources for the actual fighting, he had a different concept of the rationales which decided the Peloponnesian War? In other words, did Xenophon offer a different concept of the parameters which secure success in war and maintenance of an *arche* from that of Thucydides? Finally, did he understand the Spartan *arche* as different from the Athenian?

Xenophon did not praise Lysander because he, as a Spartan commander, did not conform to the historian's concept of the ideal commander. This is a reasonable argument because Xenophon explicitly offers his own bias and preconceptions of individuals, constitutions and political conduct.<sup>483</sup> In the post-war era Lysander enjoyed divine honours from the Greek cities (Plut. *Lys.* 28.3-4).<sup>484</sup> However, the perception of his leadership and of his qualities in antiquity was ambiguous (this recalls the representation of Philip of Macedon in ancient literature). Theopompus attributed to Lysander qualities such as industry and restraint from pleasures and drunkenness (115 *FGrH* fr. 20). However, arrogance, duplicity, self-interest and love

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<sup>483</sup> See Buckler (1980). Appendix 2 pp. 263-268. Political prejudices are found to some degree even in Thucydides, if we consider his admiration of Pericles' Athens and his credit to Pericles' policy. Political prejudices are apparent in the Oxyrhynchian historian in respect of his preference to the upper classes (*gnorimoi*) (London Fr. VI 2, XVII 1). See McKechnie, *Kern Comm.* pp. 133, 161.

<sup>484</sup> Lysander after his victory over the Athenians enjoyed the honour of the Greeks as their liberator from Athens' harsh rule and he was the first Greek to whom the cities erected altars and made sacrifices like to be a god (Plut. *Lys.* 18). Before him only Brasidas received heroic honours at Amphipolis (Thuc. V 11.1). Later such honours were granted to the Athenian Conon, e.g. the honorary decree of Erythrai to Conon (Harding 12), statues of Conon were set up at Ephesus and Samos (Paus. VI 3.16) and in Athens (Tod 128). This attitude of the Greeks towards their leaders after the Peloponnesian war was to be gradually developed to give impetus to the Macedonian rulers, Philip II and then Alexander the Great. In the Hellenistic kingdoms the godlike worship of rulers lay at the heart of their political structure.

of luxury were often attributed to him.<sup>485</sup> According to Diodorus (XIV 12.1-6), he tried to bribe the oracles of Delphi, Dodona and Ammon, committing a deed of, undoubtedly, gross impiety (Plut. *Lys.* 20.5-6, 25). Also, committing harsh treatment of the conquered cities was imputed to him (e.g. Polyaeus *Strat.* 1.45.4, Isocr. 4.110, Nepos *Lys.* 2, Plut. *Lys.* 13: Thasos, Plut. *Lys.* 14.2: Sestos,). Thus Xenophon's lack of praise for Lysander is to be found in the contempt for Lysander's personality and his political conduct, which prevailed in Xenophon's own time.

The historian did not praise Lysander because of the latter's political conduct. The Spartan king Agesilaus' standing was reduced and, in Plutarch's words, 'there was left for the king only the empty name of power' (*Lys.* 13.4). Agesilaus was the leader *par excellence* for Xenophon. Consequently, Xenophon's work did not pay the tribute might have been expected for the victor of Aigospotamoi.

Moreover, Xenophon was an admirer of the Lacedaemonian constitution and, in his works e.g., *Lacedaemonion Politeia*, he deals with the ideals of the Spartan constitution. We have argued earlier that Sparta, despite the ancient literature on the Spartan constitution, experienced remarkable changes during the Peloponnesian War and hence leaders like Lysander emerged. At the same time, the traditional factors of the Spartan society made the endeavour of Lysander-like leaders anomalous because they were in conflict with the Spartan ideals.<sup>486</sup> Lysander, although a product of the Lycurgean *agoge*, abandoned the politics of Spartan insularity and pursued the politics of imperialism.<sup>487</sup> Finally, he challenged the institutions of kingship (*Lys.*

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<sup>485</sup> See Due (1987) pp. 53-62.

<sup>486</sup> See Hamilton (1970) pp. 294-314.

<sup>487</sup> The methods of extreme imperialism employed by Lysander and by other Spartan commanders were rejected by the ephors. For example, some Spartans were opposed to Lysander's expulsion of the

30.3-4). Hence Lysander's political performance was anomalous in the view of lovers of the Spartan ideals and this explains Xenophon's treatment of him in the *Hellenica*.

Lysander however became the master of the whole of Greece after the Spartan victory over the Athenians (Plut. *Lys.* 16.1). If Lysander was the predominant leader during the last years of the war and in the period afterwards, then, undoubtedly, in Xenophon's history he did not receive the approval that Pericles, the dominant Greek leader in the first years of the war, received in Thucydides' work. However, Xenophon did not fail to give a good account of Lysander's contribution towards naval mastery, the acquisition of money and the imposition of an *arche*. By giving these aspects of Lysander's political endeavour in the final years of the war Xenophon's history epitomised the governing principles of the war as they were given in Thucydides.

In fact, Xenophon's concept of the war, as derives from his narrative, was that of Thucydides. Xenophon's history lacks Thucydides' philosophical insight into the rationales of the war. But his history of the Peloponnesian War could be perceived as the ratification of Thucydides' theoretical scheme of the war. Thucydides understood the Peloponnesian War in the framework of naval power and financial strength which were the essential components of the Athenian *arche*. These very elements decided the end of the Greek fighting and established a new *arche* in the Greek world, that is, the Spartan one, according to Xenophon's historical account. In this sense,

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population of Sestos (Plut. *Lys.* 15.1-2). The Lacedaemonians put an end to the outrageous rule of Clearchus in Byzantium (Diod. 14.12). Such an attitude reflected Spartan society towards the end of the fifth century where advanced politics were carried out *de facto*, while conservatism prevailed in the Spartan constitution. There is much value in the observation that 'Sparta could not make radical changes in its constitution even though Spartan society did change greatly' (Cawkwell (1976) p. 84).

Xenophon's history of the Peloponnesian War was a continuation, albeit unintentionally so, of Thucydides' *History*.

Xenophon's history outlines the character of the Spartan domination in Greece in the period after the Peloponnesian War until the Corinthian War. Was Xenophon's account of the Spartan *arche* different from Thucydides' account of the Athenian *arche*? The methods employed, first, by Lysander, then by the Spartan admirals in Asia and, finally, by the king Agesilaus for the imposition of Spartan hegemony were those of the fifth century Athenian *arche*. Lysander's treatment of the Greek cities after the Spartan victory, as emerges from Xenophon's account, recalls Athens' tactics towards its subjects. The ideological framework of the Spartan domination was the protection of the Greek cities from subjection to the Persian king (*Hell.* III 1.3). This proclamation became stronger with Agesilaus' expedition to Asia (396-4 BC) and his Panhellenic propaganda.<sup>488</sup> This claim was the initial objective of the Delian League.

According to Xenophon's record of the Spartan *arche*, it was imposed by the appointment of a Lacedaemonian governor (*harmost*) and ten rulers (*decadarchia* or *decarchia*) in the Greek cities (and Diod. XIV 10, 13). The establishment of harmosts and of decarchies in the Greek cities became the main instruments for the imposition of Spartan supremacy over Greece (Plut. *Lys.* 8.3).<sup>489</sup> The Athenians maintained their rule by sending garrisons to the allies and imposing governors upon them.<sup>490</sup>

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<sup>488</sup> Agesilaus' campaign in Asia was declared to be a Greek war against Persia (Diod. XIV 79.1). In this context, Agesilaus' sacrifices at Aulis (*Hell.* 3.4.3, Diod. XIV 79.2) are parallel with Agamemnon's sacrifice at Aulis. Also, Agesilaus' passage from Asia to Europe recalls the Persian wars (Diod. XIV 82.3).

<sup>489</sup> The decarchies settled by Lysander were abolished by the Spartan ephors some time later. On Xenophon's evidence (*Hell.* III 4.2) Lysander wanted to re-establish the decarchies in 396 BC. In the

The imposition of oligarchic governments on the Greek cities safeguarded Spartan sovereignty in the Greek world (Plut. *Lys.* 13.5). When Lysander was on the forefront of the Spartan politics, slaughters of democrats were attempted in the conquered cities and hence the Spartan rule became harsh (Plut. *Lys.* 14). The cruelty of the Athenian rule was epitomised in the Melian dialogue in Thucydides.<sup>491</sup> Lysander's tactics were excessive when he tried to expel the population of Sestos (*Lys.* 14.2). However, such a tactic was a perpetual technique practiced by the fifth century Athenians. The expulsion of the native population of Aegina (Thuc. II 27.1) and of Potidaea (Thuc. II 70.3, Diod. XII 46) are only some of many instances.

The Lacedaemonians levied tribute upon the cities they conquered (Diod. XIV 10: 1,000 T tribute received annually by the Spartans. This seems to be a very high figure). The tribute paid by the allies was the kernel of Athenian imperialism.<sup>492</sup>

In the course of time the Spartan *arche* caused the resentment of the Greek cities since it became a tyranny (*Hell.* III 5.13, Diod. XIV 82.2) and thus a new war, the

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same year there existed no decarchy in Ephesus (*Hell.* III 4.7). It is unlikely that the decarchies were active until 397 BC. The abolition of the decarchies took place later in 403 and early in 402 BC when Lysander's methods of imperialism caused the reaction of political bodies in Sparta. See Andrewes (1971) p. 216.

<sup>490</sup> The Charter of the Second Athenian Confederacy resolved by the Athenians in 378/7 BC (Tod 123) embodies the fifth century imperial practices of Athens in order to be rejected. According to the scheme of the new confederacy, the Athenians were to avoid what was the gist of the Delian League. Thus the cities were to remain free and autonomous, living under whatever institution they wanted, neither receiving a garrison nor having a governor imposed upon them nor paying tribute (II. 20-3). See Cargill (1981) ad loc.

<sup>491</sup> The character of fifth century Athenian imperialism and of the succeeding Spartan rule over Greece gave impetus to philosophical perceptions of the *arche* such as that of Isocrates in *Peri Eirenes*, where the corruption derived from the desire for power is underlined. See Davidson (1990) pp. 20-36.

<sup>492</sup> The contribution of the allies to the Delian League was mainly in liquid money. A similar development is attested in the relations of Sparta with its allies in a later period. In 383 BC, when the Olynthians asked the aid of the Spartans for action against Macedonian expansion, Sparta's allies were to contribute an amount of money on the basis of three Aeginetan obols for the payment of each man per day. If one of the cities failed to meet its obligation would be fined by the Spartans one stater per day for each man (*Hell.* V. 2.21). Such a practice reveals that in fourth century Sparta a great degree of monetization took place in respect of public finance.

Corinthian War, was undertaken by the Greeks (*Hellenica Oxyrhynchia* II 2-4). The expansion of the Spartan hegemony and the fear that it brought to the Greek cities was the main cause of the active animosity of the Greek cities towards Sparta. Agesilaus' campaign in Asia aroused the concern of the Greek cities towards Spartan expansionism.<sup>493</sup> Procuring control of the Aegean Sea and of Asia Minor was the core of any attempt at hegemony in the Greek world. The disposition of the Spartan *arche* as emerges from our sources is comparable with that of the Athenian *arche*. Thucydides' *History* described how the Athenian hegemony turned into a tyranny and thus many of the allied cities revolted from Athens. Also, for Thucydides the truest cause of the war was Sparta's fear of the growth of Athenian power.

During the Peloponnesian War Sparta not only developed new military techniques and economic practices but, furthermore, it developed a concept of how to exercise an *arche* in the Greek world. And as it emerges from our sources the Spartan *arche*, although short-lived, was built on the pattern of the Athenian one. Again, in a thematic sense, Xenophon's history of the Peloponnesian War is a continuation of Thucydides' *History* since throughout the account of the two historians we witness the fall of the Athenian *arche* and the establishment of the Spartan hegemony which embodied the fundamental elements of fifth century Athenian imperialism.

The conclusions we draw from the above discussion on Xenophon's view of Lysander and of the Spartan *arche* are the following. Firstly, Xenophon did not praise the achievements of Lysander. However, he reported his operations at the final stage of the war and in the years after, when the Spartans were masters of Greece.

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<sup>493</sup> See Perlman (1964) pp. 77-78.

Secondly, Xenophon's account of the Spartan military performance under Lysander's leadership displays a good understanding of the factors which decided the end of the war, that is, money, naval power and diplomacy exercised by competent leaders. In this way, Xenophon's history is informative about what the Spartans achieved during the war.

Thirdly, Xenophon's narrative of the last year of the war turned out to be a continuation of Thucydides' concept of the war as a matter of abundant financial resources, maritime forces and sound politics.

Fourthly, Xenophon through his account of Lysander's post-victory activities outlined the character of the newly founded Spartan *arche*. Again, Xenophon's history of the Peloponnesian War exhibits a conceptual similarity with Thucydides' history. Therefore the first two books of the *Hellenica* justified Thucydides' understanding of the war.

## **8. Conclusions**

(I) Xenophon's account of the final years of the Peloponnesian War concentrated on the importance of economic resources for the war to be fought. It also emphasizes the role of Persian money in Greek warfare and politics.

(II) In Xenophon's history of the Peloponnesian War a theoretical scheme of the importance of finances for Greek naval warfare is not to be found.



(III) All economic practices described by Xenophon were located in the field of actual warfare. The ways in which the *polis* economy operated and met the war expenses did not enter Xenophon's narrative. Thus we learn about economic practices employed in the course of the war. However, any attempt to reconstruct the *polis* public economy from Xenophon is bound to fail.

(IV) Although money prevailed in the military undertakings in the last years of the war, it did not take the form of a particular currency or of an emergency coinage in Xenophon's history.

(V) From Xenophon's narrative it emerges that by the end of the Peloponnesian War Greek warfare was a matter of money. Also, that hegemony in the Greek world, that is, the Spartan hegemony, relied, to a great degree, on money. In this way, Thucydides' concept of power and success at war is to be justified and a continuation of his history is to be found in Xenophon, albeit unintentional.

## CONCLUSION

The concept of the Greek economy which derives from this thesis is the following. On the evidence of Greek coinage and of Greek historiography we can argue that the economy was an autonomous sector in the edifice of the Greek *polis*. Moreover, public economy was rationally organised by the *polis* and thus certain economic practices developed throughout time. Thus public expenses and the increasing need for money and, gradually, for liquid money, first, in public and then in private economic activities because of monetization of the economy were met.

The rationalisation of the economic practices employed by the Greek cities and their incorporation into the structure of the Greek city-state were mainly the outcome of the development of Greek warfare. More specifically, the development of Greek warfare towards the predominance of naval warfare made the use of money inevitable and gave an impetus to the development of the economy of the Greek *poleis* independently from other *polis* institutions. Also, naval warfare increased the money-based institutions of the *poleis*. In addition, the Greek economy had always been shaped and developed under the exigencies of war since the Greek cities were continually engaged in warfare. Changes and reforms occurred in the management and administration of *polis* public finance because of the increasing need for high expenditure and because of economic crises due to war, which required immediate resolution. This is the main contribution of this thesis to ‘intense debate between scholarly camps described as primitivist and modernist’ about the Greek economy, that is, focusing on Greek warfare, which was the subject-matter of the Greek

historians, we are able to understand the Greek economy as a rational and autonomous institution of the Greek *polis*.

However, the *polis* economy is not defined only by the economic practices that the cities developed throughout time. It is defined also by the economic thought and the ideological perception of wealth, money and economics that the ancient Greeks and their intellectuals had developed in the classical period. Such ideological perceptions of economics are to be found in the work of the three historians we have studied. To all three historians we attributed an understanding of the economics of the wars that they narrated and of certain economic practices employed by *poleis*. But none of the *Histories* provides adequate evidence for any reconstruction of the *polis* economy. This was because the historians admitted to their narrative, to a different degree and in a different way, as we have argued in this thesis, other factors, which were related to the prevailing ideologies of their era, in order to explain the causes of their wars, the fighting between Greeks, the consequences of fighting and the policies of the Greek cities at war. Thus the ‘embedness’ of the Greek economy in other *polis* institutions had more to do with the economic ideologies of the Greeks than with the reality of the Greek economy itself. The Greeks fused their understanding of the *polis* economy in a long-established ideology of money, wealth and economic ‘behaviour’, which entailed poetical and philosophical notions of money, wealth and the perils of excessive prosperity. For in the Greek world changes occurred in society but their full reception by individuals and intellectuals was a gradual and long term-procedure. The Greeks therefore had ‘a concept of economics’ and Greek historians had developed an understanding of economics but it was bounded in the ‘ideology’ of economics.

## BIBLIOGRAPHY

- A.R.Ackroyd, 'Problems in the handling of biblical and related sources in the Achaemenid period' in *Achaemenid History III* pp. 33-54
- S.M.Adams, 'Salamis symphony: the *Persae* of Aeschylus' in E.Segal (ed.), *Oxford Readings in Greek Tragedy*, Oxford, 1983 pp. 34-41
- J.W.Allison, *Power and Preparedness in Thucydides*, Baltimore and London, 1989
- S.B.Aleshire, 'The economics of dedication at the Athenian Asklepieion' in T.Linders, B.Alroth (eds), *Economics of Cult in the Ancient Greek World, Proceedings of the Uppsala Symposium 1990*, *Boreas* 21 (1992) pp. 85-99
- J.Alty, 'Dorians and Ionians', *JHS* 1982 (102) pp. 1-14
- M.Amandry, S.Hurter (eds), *Travaux de numismatique grecque offerts à G. Le Rider*, London, 1994
- J.K.Anderson, 'Hoplite weapons and offensive arms' in V.D.Hanson (ed.) *The Classical Greek Battle Experience*, London, New York, 1991 pp. 15-37
- A.Andrewes, 'Sparta and Arcadia in the early fifth century' *Phoenix* 6 (1952) pp. 1-5
- , 'The generals in the Hellespont 410-407 BC', *JHS* 73 (1953) pp. 2-9
- , 'Two notes on Lysander', *Phoenix* 25 (1971) pp. 206-226
- , 'Notion and Kyzikos; the sources compared', *JHS* 102 (1982) pp. 15-25
- V.Andreyev, 'Some aspects of agrarian conditions in Attica in the fifth to third centuries BC', *Eirene* 12 (1974) pp. 5-46
- C.M.Antonaccio, 'Ethnicity and colonization' in I.Malkin (ed.), *Ancient Perceptions of Greek Ethnicity*, Cambridge Mass., London, 2001 pp. 113-157
- Z.H.Archibald, *The Odrysian Kingdom of Thrace. Orpheus Unmasked*, Oxford, 1998
- O.K.Armayor, 'Herodotus' catalogue of the Persian Empire in the light of the monuments and the Greek literary tradition', *TAPA* 108 (1978) pp. 1-9

- I.Arnaoutoglou, *Ancient Greek Laws. A Sourcebook*, London, New York, 1988
- R.H.J.Ashton, 'The coinage of Nisyros' in M.Amandry, S.Hurter (eds), *Travaux de numismatique grecque offerts à G. Le Rider*, London, 1999 pp. 15-24
- , 'The coinage of Rhodes 408-c. 190 BC' in A.Meadows, K.Shimpton (eds), *Money and its Uses in the Ancient Greek World*, Oxford, 2001 pp. 79-116
- R.H.J.Ashton, S.Hurter (eds), *Studies in Greek Numismatics in Memory of M.J.Price*, London, 1988
- H.C.Avery, 'The number of Persian dead at Marathon', *Historia* 22 (1973) p. 757
- J.M.Balcer, 'Ancient conventions in the Bisitun text' in *Achaemenid History VIII* pp. 257-264
- J.P.Barron, 'Religious propaganda of the Delian League', *JHS* 134 (1964) pp. 35-47
- , *The Silver Coins of Samos*, London, 1966
- , 'The 5<sup>th</sup> c. discoboloi of Kos' in C.M.Kraay, G.K.Jenkins (eds) *Essays in Greek Coinage Presented to E.S.G Robinson*, Oxford, 1968 pp. 75-89
- , 'Chios in the Athenian empire' in J.Boardman, C.E.Vaphopoulou-Richardson (eds), *Chios. A Conference at the Homereion in Chios 1984*, Oxford, 1986 pp. 89-103
- , 'Two goddesses in Samos' in R.H.J.Ashton, S.Hurter (eds), *Studies in Greek Numismatics in Memory of M.J.Price*, London, 1988 pp. 23-36
- M.F.Baslez, 'La circulation et le rôle des dariques en Grèce d' Europe à la fin du Ve et au IV<sup>e</sup> siècles', *REA* 91 (1989) pp. 237-246
- H.Bengtson, *The Greeks and the Persians from the 6<sup>th</sup> to the 4<sup>th</sup> c.*, London, 1965
- S.Benardete, *Herodotean Inquires*, The Hague, 1969
- J.G.P.Best, *Thracian Peltasts and their Influence on Greek Warfare*, Groningen, 1969
- A.D.H.Bivar, 'Achaemenid coins, weights and measures' in *CHI II* pp. 610-639

D.Blackman, 'The Athenian navy and allied naval contributions in the Pentecontaetia'  
*GRBS* 10 (1969) pp. 179-216

A.Blamire, 'Athenian finance, 454-404 BC', *Hesperia* 70 (2001) pp. 99-126

W.Blösel, 'The Herodotean picture of Themistocles: a mirror of fifth century Athens'  
in N.Luraghi (ed), *The Historian's Craft in the Age of Herodotus*, Oxford, 2001 pp.  
179-197

J.Boardman, *The Greeks Overseas*, (n.ed), London, 1980

-, *The Oxford History of Classical Art*, Oxford, 1997

-, *Persia and the West*, London, 2000

F.Bodenstedt, 'Observations on some early electrum types of Mytilene and Phocaia',  
*ANSMN* 22 (1977) pp. 1-7

-, *Die Elektronmünzen von Phokaia und Mytilene*, Tübingen, 1981

D.Boedeker, 'Heroic historiography: Simonides and Herodotus on Plataea' in  
D.Boedeker and D.Sider (eds), *The New Simonides, Arethusa* 29 vol 2 (1996) pp. 223-  
242

J.S.Boersma, *Athenian Building from 561/0 to 405/4 BC*, Groningen, 1970

H.Bowden, *Classical Athens and the Delphic Oracle: Divination and Democracy*,  
Cambridge, 2005

D.W.Bradeen, 'The popularity of the Athenian empire', *Historia* 9 (1960) pp. 258-  
269

-, 'The Kallias decrees again', *GRBS* 11 (1970) pp. 185-196

J.B.Brashinsky, 'Epigraphical evidence on Athens' relations with the North Pontic  
Greek cities' in *Acta of the 5th International Congress of Greek and Latin Epigraphy*  
Cambridge, 1967, Oxford, 1971 pp. 119-123

P.Briant, *Darius, les perses et l'empire*, Paris, 1992

-, *Histoire de l'empire perse*, Paris, 1996

S.C.Brown, 'The Medikos logos of Herodotus and the evolution of the Median state' in *Achaemenid History III* pp. 71-86

W.L.Brown, 'Pheidon's alleged Aeginetan coinage', *NC* (6<sup>th</sup> ser.) 10 (1950) pp. 177-204

D.Brun, *Eisphora-syntaxis-stratitotika: recherches sur les finances militaires d'Athènes au IV<sup>e</sup> siècle av. J.-C.*, Paris, 1983

P.A.Brun, 'Athenian settlements abroad in the fifth century BC' in E.Badian (ed), *Ancient Society and Institutions: Studies Presented to Victor Ehrenberg on his 75<sup>th</sup> Birthday*, Oxford, 1966 pp. 71-92

J.Buckler, *The Theban Hegemony 371-362 BC*, Cambridge, Mass., 1980

A.Burford, 'The purpose of inscribed building accounts' in *Acta of the 5<sup>th</sup> International Congress of Greek and Latin Epigraphy. Cambridge 1967*, Oxford, 1971 pp. 71-76

W.Burkert, *Greek Religion: Archaic and Classical* (tr. J.Raffan), Oxford, 1985

A.R.Burn, *Persia and the Greeks. The Defence of the West, ca. 546-478 BC* (2<sup>nd</sup> ed.), London, 1984

T.V.Buttrey, 'The Athenian currency law of 375/4 BC' in O.Mørkholm, U.Waggoner (eds), *Greek Numismatics and Archaeology. Essays in Honour of Margaret Thompson*, Wetteren-Belgium, 1979 pp. 33-45

M.Caccamo Caltabiano-P.Radici Colace, 'Darico persiano e nomisma greco: differenze strutturali, ideologiche et functionalì alla luce del lessico greco' *REA* 91 (1989) pp. 213-226

H.A.Cahn, 'Le monnayage des satrapes: iconographie et signification', *REA* 91 (1989) pp. 97-106

- , and D.Gerin, 'Themistocles at Magnesia, *NC* 148 (1988) pp. 12-20
- P.Calligas, 'An inscribed lead plaque from Korkyra', *BSA* 66 (1971) pp. 79-93
- P.Calmeyer, 'Das Datum der Grundunginschrift vom Apadana und die Krone der  
altesten 'Bogenschtitzen', *REA* 91 (1989) pp. 51-59
- , 'Greek historiography and Achaemenid reliefs' in *Achaemenid History II* pp. 11-26
- J.M.Camp, *The Athenian Agora*, London, 1986
- J.McK.Camp and J.H.Kroll, 'The agora mint and Athenian bronze coinage', *Hesperia*  
70 (2001) pp. 127-162
- D.A.Campbell, *The Golden Lyre. The Themes of the Greek Lyric Poets*, London, 1983
- , *Greek Lyric Poetry III*, Cambridge, Mass., 1991
- , *Greek Lyric Poetry* (repr.) Bristol, 1994
- L.Canfora, *Prima legione di storia greca*, Rome-Bari, 2000
- S.Cargill, *The Second Athenian League: Empire or Free Alliance*, Berkeley-Los  
Angeles, London, 1981
- , *Athenian Settlements of the Fourth Century*, *Mnemosyne Suppl.* 145 (1995)
- I.Carradice, 'The 'regal' coinage of the Persian empire' in I.Carradice (ed), *Coinage  
and Administration in the Athenian and Persian Empires. The 9th Oxford Symposium  
on Coinage and Monetary History*, *BAR International Series* 343, 1987 pp. 73-93
- , and M.J.Price, *Coinage in the Greek World*, London, 1988
- P.Cartledge, 'Hoplites and heroes. Sparta's contribution to the technique of ancient  
warfare', *JHS* 97 (1977) pp. 11-27
- , 'Richard Talbert's revision of the Spartan-helot struggle: a reply', *Historia* 40  
(1991) pp. 379-381
- , 'We are all Greeks? Ancient (especially Herodotean) and modern contestations of  
hellenism', *BICS* 40 (1995) pp. 75-82



- , 'The origins and the organisation of the Peloponnesian League', in M. Whitby (ed), *Sparta*, Edinburgh, 2002 pp. 223-230
- L. Casson, *Ships and Sea ManSHIP in the Ancient World*, Baltimore and London, 1971
- S. Casson, *Macedonia, Thrace and Illyria*, Oxford, 1926
- M. B. Cavanaugh, *Eleusis and Athens. Documents in Finance, Religion and Politics in the 5<sup>th</sup> c. BC*, Atlanta, Georgia, 1996
- G. Cawkwell, 'A note on the Heracles coinage alliance of 394 BC', *NC* (6<sup>th</sup> ser.) 26 (1956) pp. 69-75
- , 'Agesilaus and Sparta', *CQ* 26 (1976) pp. 62-84
- , 'The decline of Sparta', *CQ* 33 (1983) pp. 385-400
- , *Thucydides and the Peloponnesian War*, London and New York, 1997
- P. Chrysostomou, 'Νέες επιγραφές από την Πέλλα και την περιοχή της' in *Μνείας χάριν, Τόμος στη μνήμη Μαίρης Σιγανίδου*, Thessaloniki, 1998 pp. 356-390
- , 'Θησαυρός πρώιμων Μακεδονικών νομισμάτων από την Πέλλα', *Ancient Macedonia I* pp. 621-644
- K. Clinton, 'IG I2 5, The Eleusinia, and the Eleusinians', *AJP* 100 (1979) pp. 1-12
- E. E. Cohen, 'Athenian finance, maritime and landed yields', *ClAnt* 8 (1989) pp. 207-223
- , 'Banking as a 'family business'. Legal adaptations affecting wives and slaves', *Symposion* 1990 pp. 239-263
- , *Athenian Economy and Society. A Banking Perspective*, Princeton, New Jersey, 1992
- W. R. Connor, 'History without heroes: Theopompus' treatment of Philip of Macedon', *GRBS* 8 (1967) pp. 133-154
- , *Thucydides*, Princeton, New Jersey, 1984

- , 'Hiera kai hosia and the classical Athenian concept of the state' *Anc. Soc.* 19 (1988) pp. 161-188
- C.Conophagos, *Le Laurium antique et la technique grecque de la production de l'argent*, Athens, 1980
- J.M.R.Cormack, 'The gymnasiarchal law of Beroea', *Ancient Macedonia II* pp. 139-49
- F.M.Cornford, *Thucydides Mythistoricus*, London, 1907
- G.Crane, *Thucydides and the Ancient Simplicity. The Limits of Political Realism*, Berkeley, Los Angeles, London, 1998
- M.H.Crawford, 'Plated coins-false coins', *NC* (7th ser) 8 (1968) pp. 55-91
- , 'Money and exchange in the Roman world', *JRS* 60 (1970) pp. 40-48
- , 'Solon's alleged reform of weights and measures', *Eirene* 10 (1972) pp. 5-8
- , 'Hubs and dies in classical antiquity', *NC* 141 (1981) pp. 176-177
- M.A.Dandamayev, 'Connections between Elam and Babylonia in the Achaemenid period' in *The Memorial Volume of the Vth International Congress of Iranian Art and Archaeology, Tehran-Isfaham-Shiraz 11<sup>th</sup>-18<sup>th</sup> April 1968*, Vol. I, Tehran, 1972 pp. 258-264
- J.Davidson, 'Isocrates against imperialism: an analysis of the *De Pace*', *Historia* 39 (1990) pp. 20-36
- J.Davies, *Athenian Propertied Families 600-300 BC*, Oxford, 1971
- , *Wealth and the Power of Wealth in Classical Athens*, New York, 1981
- , *Democracy and Classical Greece*, (2nd ed.), London, 1993
- , 'Accounts and accountability in classical Athens' in R.Osborne, S.Hornblower (eds), *Ritual, Finances, Politics. Athenian Democratic Accounts Presented to D.M.Lewis*, Oxford, 1994 pp. 201-212

- , 'Temples, credit and the circulation of money' in A.Meadows, K.Shimpton (eds), *Money and its Uses in the Ancient Greek World*, Oxford, 2001 pp. 117-128
- N.Davis, *Greek Coins and Cities (from the Collection at the Seattle Art Museum)*, London, 1967
- P.Debord, *L'Asie Mineure au IV<sup>e</sup>siècle (412-323 a.C)*, Bordeaux, 1999
- N.H.Demand, *Thebes in the Fifth Century*, London, 1982
- V.Demetriadi, 'Dion in Macedonia: a bronze coinage of the classical period' in R.H.J.Ashton, S.Hurter (eds), *Studies in Memory of M.J.Price*, London, 1998 pp. 115-117
- R.Descat, 'Darius, le roi Kapelos' in *Achaemenid History VIII* pp. 161-166
- , 'Notes sur l'histoire du monnayage achéménide sous le règne de Darius Ier, *REA* 91 (1989) pp. 15-31
- J.Desneux, *Les tetradrachmes d' Akanthos*, Bruxelles, 1949
- R.Develin, 'Prytany systems and eponyms for financial boards in Athens', *Klio* 68 (1986) pp. 67-83
- V.A.Doukakes, *To Χρήμα στην Ελληνική Αρχαιότητα*, Athens, 1996
- K.J.Dover, 'ΔΕΚΑΤΟΣ ΑΥΤΟΣ', *JHS* 70 (1960) pp. 61-77=K.J.Dover, *The Greeks and their Legacy. Collected Papers Volume II: Prose Literature, History, Society, Transmission, Influence*, Oxford, 1988 pp. 159-180
- , *Thucydides*, G&R, 7 (1973)
- , 'Thucydides on oracles' in K.J.Dover (ed), *The Greeks and their Legacy. Collected Papers Volume II: Prose Literature, History, Society, Transmission, Influence*, Oxford, 1988 pp. 65-73
- , 'Herodotean plausibilities' in M.Austin, J.Harris, Ch.Smith (eds), *Modus Operandi*, London, 1998 pp. 219-226

- S.Dow, 'The Greater Demarkhia', *BCH* 89 (1965) pp. 180-213
- B.Due, 'Lysander in Xenophon's *Hellenica*', *Class.Med.* 38 (1987) pp. 53-62
- L.Edmunds, 'Thucydides in the act of writing' in R.Prelagostini (ed), *Traditione e innovazione nella cultura greca da Omero all'età ellenistica II*, Rome, 1993 pp. 831-852
- C.Edson, 'Notes on the Thracian phoros', *CP* (1947) pp. 88-105
- H.van Effenterre, F.Ruzé, *Nomima I. Recueil d'inscriptions politiques et juridiques de l'archaïsme grec*, Rome, 1994
- , *Nomima II. Recueil d'inscriptions politiques et juridiques de l'archaïsme grec*, Rome, 1995
- V.Ehrenberg, 'Thucydides on Athenian colonisation', *APh* 47 (1952) pp. 143-49=*Polis and Imperium* (1965) pp. 245-253
- D.Fehling, *Herodotus and his Sources, Citation, Invention and Narrative Art* (tr. J.G.Howie), Leeds, 1989
- C.Feyel, 'Aperçu sur le financement de la guerre dans la cité classique' in F.Prost (ed), *Armées et sociétés de la Grèce classique*, Paris, 1999 pp. 209-221
- T.Figueira, 'Population patterns in late archaic and classical Sparta', *TAPA* 116 (1986) pp. 165-213
- , 'Aigina and the naval strategy', *Rh. M.* 133 (1990) pp. 15-51
- , *Athens and Aigina in the Age of Imperial Colonisation*, Baltimore and London, 1991
- , *The Power of Money; Coinage in the Athenian Empire*, Philadelphia, 1998
- N.Fisher, 'Hybris, revenge and stasis in the Greek city-states' in A.J.Bakker, I.J.F de Jong, H. van Wees (eds), *Brill's Companion to Herodotus*, Leiden, Boston, Köln (2002) pp. 83-112

- H.I.Flower, 'Herodotus and Delphic traditions about Croesus' in M.A.Flower and M.Toher (eds), *Georgica. Greek Studies in Honour of G.Cawkwell*, BICS Suppl. 58 (1991) pp. 57-77
- C.W.Fornara, 'The hoplite achievement at Psyttaleia', *JHS* 86 (1966) pp. 51-54
- , 'The date of the Callias decrees', *GRBS* 11 (1970) pp. 185-196
- , *Herodotus. An Interpretative Essay*, Oxford, 1971
- B.H.Fowler, 'Thucydides 1.107-8 and the Tanagran federal issues', *Phoenix* 11 (1957) pp. 164-170
- L.Foxhall, 'Fighting and farming in ancient Greece' in J.Rich and G.Shipley (eds), *War and Society in the Greek World*, London, 1993 pp. 134-145
- S.Fried, 'The decadrachm hoard: an introduction' in I.Carradice (ed), *Coinage and Administration in the Athenian and the Persian Empires. The 9th Oxford Symposium on Coinage and Monetary History*, BAR International Series 343, 1987 pp. 1-20
- A.Fuks, 'Isocrates and the social and economic situation in Greece', *Ancient Society* 3 (1972) pp. 17-44
- V.Gabrielsen, 'The *naucrariai* and the Athenian navy', *Class. & Med.* 36 (1985) pp. 21-51
- , 'The *diadicasia* documents', *Class. & Med.* 38 (1987a) pp. 39-51
- , 'The *antidosis* procedure in classical Athens', *Class. & Med.* 38 (1987b) pp. 1-38
- , *Financing the Athenian Fleet. Public Taxation and Social Relations*, Baltimore and London, 1994
- Y.Garlan, *La guerre dans l'antiquité*, Paris, 1972
- R.Garland, *Introducing New Gods: the Politics of Athenian Religion*, London, 1992
- P.Garnsey, 'Grain for Athens' in P.A.Cartledge, F.D.Harvey (eds), *Crux. Essays Presented to G.E.M de Ste Croix, on his 75<sup>th</sup> Birthday*, London, 1985 pp. 62-75

- M.B.Garrison, M.C.Root, *Achaemenid History IX. Persepolis Seal Studies*, Leiden, 1996
- Ph.Gauthier, M.B.Hatzopoulos, *La loi gymnasiarchique de Beroia, Meletemata* 16, Paris, 1993
- D.L.Gera, *Xenophon's Cyropaedia. Style, Genre and Literary Technique*, Oxford, 1993
- M.Giacchero, 'L intuizione dei fenomeni e dei comportamenti economici nelle storie di Erodoto' in *Studi di storia antica in memoria di L. de Regibus*, Genova, 1969 pp. 91-135
- A.Giovannini, 'Athenian currency in the late fifth and early fourth centuries BC' *GRBS* 16 (1975) pp. 185-196
- D.F.Graf, 'The Persian royal road system' in *Achaemenid History VIII* pp. 167-189
- A.J.Graham, 'Inscription of public imprecations', *Chiron* 11 (1981) pp. 1-30
- , *Colony and Mother City in Ancient Greece* (2<sup>nd</sup> ed), Chicago, 1983
- , 'Commercial interchanges between Greeks and natives', *Ancient World* 10 (1984) pp. 1-10
- A.K.Grayson, *Assyrian and Babylonian Chronicles*, New York, 1975
- C.H. Grayson, 'Did Xenophon intend to write history?' in B.Levick (ed.), *The Ancient Historian and his Material*, 1975 pp. 31-43
- P.Green, *The Greco-Persian Wars*, (repr.), Berkeley, Los Angeles, London, 1996
- A.Griffiths, 'Democedes of Croton: A Greek doctor at the court of Darius' in *Achaemenid History II* pp. 37-51
- , 'Behind the lines: the genesis of stories in Herodotus' in F.Budelmann, P.Michelakis (eds), *Homer, Tragedy and Beyond. Essays in Honour of P.E.Easterling*, London, 2001 pp. 75-89

- M.Guarducci, *Epigrafia Greca I*, Rome, 1967
- A.C.Gunter, 'Models of the orient in the art history of the orientalizing period in *Achaemenid History V* pp. 131-147
- J.Haas, 'Athenian power before Themistocles', *Historia* 34 (1985) pp. 29-46
- E.Hall, *Inventing the Barbarian*, Oxford, 1989
- , (ed.), *Aeschylus' Persians*, Warminster, 1996
- , 'Asia unmanned: images of victory in classical Athens' in *Achaemenid History XI* pp. 108-133
- R.T.Hallock, 'The evidence of the Persepolis tablets' in *CHI II* pp. 588-609
- C.D.Hamilton, 'Spartan politics and policy, 405-401 BC', *AJP* 91 (1970) pp. 294-314
- , 'Agesilaus and the failure of Spartan hegemony', *Ancient World* 5 (1982) pp. 67-78
- , *Agesilaus and the Failure of Spartan Hegemony*, Ithaca and London, 1991
- N.G.L.Hammond, 'The battle of Salamis', *JHS* 76 (1956) pp. 32-54
- , and N.G.L.Griffith, *A History of Macedonia Vol. II*, Oxford, 1979
- M.H.Hansen, *The Athenian Democracy in the Age of Demosthenes*, Oxford-Cambridge Mass., 1991
- , *et alii*, 'The demography of the Attic demes: the evidence of the sepulchral inscriptions', *Analecta Romana* (1990) pp. 25-44
- V.D.Hanson, *The Western Way of War* (2<sup>nd</sup> ed), Berkeley, Los Angeles, London, 1989
- , 'Hoplite technology in phalanx battle' in V.D.Hanson (ed), *Hoplites: the Classical Greek Battle Experience*, London, New York, 1991a pp. 63-84
- , 'The ideology of hoplite battle, ancient and modern' in V.D.Hanson (ed.), *Hoplites: the Classical Greek Battle Experience*, London, New York, 1991b pp. 3-15
- , 'Thucydides and the desertion of Attic slaves during the Deceleian war', *ClAnt* 11 (1992) pp. 210-228

- , *Warfare and Agriculture in Classical Greece*, Berkeley, Los Angeles, London, 1998
- , 'Hoplite battle as ancient Greek warfare, when, where, and why?' in H.van Wees (ed), *War and Violence in Ancient Greece*, London, 2000 pp. 201-232
- N.Hardwick, 'The coinage of Terone from the fifth to the fourth century' in R.H.J.Ashton, S.Hurter (eds), *Studies in Memory of M.J.Price*, London, 1998 pp. 119-134
- D.Harris, 'Freedom of information and accountability. The inventory lists of the Parthenon' in R.Osborne, S.Hornblower (eds), *Ritual, Finances, Politics. Athenian Democratic Accounts Presented to D.M.Lewis*, Oxford, 1994 pp. 213-226
- W.V.Harris, 'Writing and literacy in the archaic Greek city' in J.H.M.Strabbe, R.A.Tybout, H.S.Versnel (eds), *Energieia. Studies in Ancient History and Epigraphy Presented to H.W.Pleket*, Amsterdam, 1996 pp. 57-77
- J.Hart, *Herodotus and Greek History*, London, 1982
- M.B.Hatzopoulos, 'Succession and regency in classical Macedonia', *Ancient Macedonia IV* pp. 279-292
- , *Actes de vente de la Chalcidique centrale, Meletemata 6*, Athens, 1988
- , *Actes de vente d'Amphipolis, Meletemata 23*, Athens, 1991
- , *Macedonian Institutions under the Kings. I. A Historical and Epigraphic Study, Meletemata 22*, Athens, 1996
- , 'Αργυρές δραχμές και χρυσοί στατήρες σε επιγραφές της Μακεδονίας' in *Το νόμισμα στο Μακεδονικό χώρο, Οβολός, 4*, Thessaloniki, 2000 pp. 79-87
- , and L.Loukoupoulou, *Recherches sur les marches orientales des Temenides (Anthemonte-Kalindoia), Meletemata 11*, Athens, 1992
- B.V.Head, *On the Chronological Sequence of the Coins of Ephesus*, London, 1880



- J.F.Healy, 'A new light on the unique stater of Mytilene', *ANSMN* 8 (1958) pp. 1-10
- , 'Mint practice at Mytilene. Evidence for the use of hubs' in M.M.Archibald, M.R.Cowell (eds), *Metallurgy in Numismatics*, Vol. III, London, 1993 pp. 7-18
- A.S.Henry, *Honours and Privileges in Athenian Decrees. The Principal Formulae of Athenian Honorary Decrees*, New York, 1983
- W.P.Henry, *Greek Historical Writing*, Chicago, 1966
- Herodotus *Histories* with a preface by I.Th.Kakrides, an introduction, a translation and commentary by D.N.Maronites, Athens, 1964
- C.A.Hersh, 'A fifth-century circulation hoard of Macedonian tetrabols' in W.E.Metcalf (ed), *Mnemata: Papers in Memory of Nancy M. Waggoner*, New York, 1991 pp. 3-20
- G.F.Hill, *Historical Greek Coins*, London, 1906
- S.Hodkinson, 'Inheritance, marriage and demography: perspectives upon the success and decline of classical Sparta' in A.Powell (ed), *Classical Sparta: Techniques behind her Success*, London, 1989 pp. 79-121
- , 'Sharecropping and Sparta's exploitation of the helots' in J.M.Sanders (ed), *ΦΙΛΟΛΑΚΩΝ. Lakonian Studies in Honour of H.Catling*, London, 1992 pp. 123-134
- , *Property and Wealth in Classical Sparta*, London, 2000
- , 'Social order and the conflict of values in classical Sparta' in M.Whitby (ed), *Sparta*, Edinburgh, 2002 pp. 223-230
- R.R.Holloway, 'An archaic hoard from Crete and the early Aeginetan coinage', *ANSMN* 17 (1971) pp. 1-21
- R.J.Hopper, 'Observations on the Wappenmünzen' in C.M.Kraay, G.K.Jenkins (eds), *Essays in Greek Coinage Presented to E.S.G Robinson*, Oxford, 1968 pp. 16-39
- , *Trade and Industry in Classical Greece*, London, 1979

- S.Hornblower, *A Commentary on Thucydides, I, Books I-III*, Oxford, 1991
- , 'Thucydides' use of Herodotus', in J.M.Sanders (ed), *ΦΙΛΟΛΟΓΩΝ. Lakonian Studies in Honour of H.Catling*, London, 1992a pp. 141-154
- , 'The religious dimension to the Peloponnesian War, or what Thucydides does not tell us', *HSCP* 94 (1992b) pp. 169-197
- , 'Persia' in *CAH VI* (2<sup>nd</sup> ed.), 1994
- , 'Sticks, stones, and Spartans. The sociology of Spartan violence' in H.van Wees (ed.), *War and Violence in Ancient Greece*, London, 2000 pp. 57-82
- , 'Epic and epiphanies. Herodotus and the 'New Simonides' in D.Boedeker and D.Sider (eds), *The New Simonides. Contexts of Praise and Desire*, Oxford, 2001a pp. 135-147
- , 'Greeks and Persians. West against East' in A.V.Hartmann and B.Heuser (eds), *War, Peace and World Orders in European History*, London and New York, 2001b pp. 48-61
- , *The Greek World 479-323 BC*, (3<sup>rd</sup> ed.), London, 2002
- C.J.Howgego, 'Why did ancient states strike coins?', *NC* (1990) pp. 1-25
- , *Ancient History from Coins*, London-New York, 1995
- V.J.Hunter, *Thucydides. The Artful Reporter*, Toronto, 1973
- E.Hussey, 'Thucydidean history and Democritean theory' in P.Cartledge and F.D.Harvey (eds), *CRUX: Essays in Greek History Presented to G.E.de Ste Croix*, London, 1985 pp. 118-138
- S.Hurter, 'The 'Pixodaros hoard. A summary' in R.H.J.Ashton, S.Hurter (eds), *Studies in Greek Numismatics in Memory of M.J.Price*, London, 1988 pp. 147-153
- H.R.Immerwahr, 'Aspects of historical causation in Herodotus', *TAPA* 87 (1956) pp. 241-280

- , 'Pathology of power and the speeches in Thucydides' in P.A.Stadter (ed), *The Speeches in Thucydides*, Chapel Hill, 1973 pp. 16-31
- , *Attic Script. A Survey*, Oxford, 1990
- S.Isager and J.E.Skydsgaard, *Ancient Greek Agriculture*, London and New York, 1992
- A.Jackson, 'The bronze coinage of Gortyn', *NC* 11 (7<sup>th</sup> ser.) (1971) pp. 37-51
- P.Jacobsthal, 'The date of the Ephesian foundation-deposit', *JHS* LXXI (1951) pp. 85-93
- A.H.M.Jones, *Athenian Democracy*, Baltimore, (repr.) 1995
- J.E.Jones, 'Ancient Athenian silver mines, dressing floors and smelting sites', *JHMS* 18 (1984) pp. 65-81
- B.Jordan, *The Athenian Navy in the Classical Period*, Berkeley, Los Angeles, London, 1975
- D.Kagan, 'The economic origins of the Corinthian War', *La Parola del Passato* 16 (1961) pp. 321-341
- , *The Peloponnesian War, Athens and Sparta in Savage Conflict 431-404 BC*, London, 2003
- J.K.Kagan, 'The decadrachm hoard: chronology and consequences', *NC* 2-3 (1981) pp. 21-8
- , Epidamnus or Ephyre (Elea). A note on the coinage of Corinth and her colonies at the outbreak of the Peloponnesian War' in R.H.J.Ashton, S.Hurter (eds), *Studies in Greek Numismatics in Memory of M.J.Price*, London, 1988 pp. 163-173
- L.Kallet-Marx, 'Did tribute fund the Parthenon?' *Class. Ant.* 8 (1989a) pp. 252-266
- , 'The Kallias decree, Thucydides, and the outbreak of the Peloponnesian War', *CQ* 39 (1989b) pp. 94-113

- , *Money, Expense, and Naval Power in Thucydides' History 1-5.24*, Berkeley, 1993
- L.Kallet, *Money and the Corrosion of Power in Thucydides*, Berkeley, Los Angeles, London, 2001
- P.Kalligas, 'An inscribed lead plaque from Korkyra', *BSA* 66 (1971) pp. 79-93
- M.E.Kamboures, *Αρχαίοι Έλληνες πολεμιστές*, Athens, 2000
- E.Kearns, *The Heroes of Attica*, *BICS Suppl.* 57 (1989)
- D.H.Kelly, 'What happened to the Athenians captured in Sicily?', *CR* 20 (1970) pp. 127-131
- J.H.Kent, 'The temple estates of Delos, Rheneia and Mykonos', *Hesperia* 17 (1948) pp. 243-338
- R.G.Kent, *Old Persian, Grammar, Texts, Lexicon* (2<sup>nd</sup> ed), New Haven, 1953
- P.B.Kern, *Ancient Siege Warfare*, Bloomington, Indianapolis, 1999
- P.Keyser, 'Errors of calculation in Herodotus' *CJ* 81 (1986) pp. 230-242
- H.S.Kim, 'Archaic coinage as evidence for the use of money' in A.Meadows, K.Shimpton (eds), *Money and its Uses in the Ancient Greek World*, 2001 pp. 7-21
- , 'Small change and the moneyed economy' in P.Cartledge, E.E.Cohen, L.Foxhall (eds), *Money, Labour and Land*, London, 2002 pp. 44-51
- P.Kinns, 'Ionia: the pattern of coinage during the last century of the Persian Empire', *REA* 91 (1989) pp. 183-193
- G.Kirkwood (ed.), *Selections from Pindar* (with an Introduction and Commentary), *APhAss* 7 (1982)
- D.Konstan, 'Persians, Greeks and empire', *Arethusa* 20 (1987) pp. 59-73
- C.M.Kraay, 'The archaic owls of Athens', *NC* 26 (1956) pp. 43-68
- , 'An interpretation of *Athenaion Politeia* ch. 10' in C.M.Kraay, G.K.Jenkins (eds) *Essays in Greek Coinage Presented to E.S.G.Robinson*, 1968 pp. 1-9

-, *Greek Coins and History*, London, 1969

-, *Archaic and Classical Greek Coins*, London, 1976

-, and G.K.Jenkins (eds), *Essays in Greek Coinage Presented to E.S.G.Robinson*, 1968

S.Kremmydi-Sisilianou, 'Η χρήση Μακεδονικών χαλκών για την κοπή Ακαρνικών εκδόσεων' in *Το νόμισμα στο Μακεδονικό Χώρο*, *Οβολός* 4, Thessaloniki, 2000 pp. 61-77

P.Krentz (ed), *Xenophon Hellenica I-II.3.10*, London, 1989a

-, 'Had Xenophon read Thucydides VIII before he wrote the 'continuation' (*Hell. I-II.3.10*)', *Ancient World* 20 (1989b) pp. 15-18

-, 'Archaic and classical Greek war' in P.Sabins et al. (eds), *The Cambridge History of Greek and Roman Warfare*, Cambridge (forthcoming)

Ch.B.Kritzas, 'Χαλκός πίναξ από το Άργος (460-450)' in *Πρακτικά του Η' Διεθνούς Συνεδρίου Ελληνικής και Λατινικής Επιγραφικής*, Athens, 1987 p. 329

J.H.Kroll, 'Aristophanes' *πονηρά χαλκία*: a reply', *GRBS* 17 (1976) pp. 329-341

-, 'A chronology of early Athenian bronze coinage, ca. 350-250' in O.Mørkholm, N.M.Waggoner (eds), *Greek Numismatics and Archaeology. Essays in Honour of Margaret Thompson*, Wetteren-Belgium, 1979 pp. 139-154

-, 'From Wappenmünzen to gorgoneia to owls', *ANSMN* 26 (1981) pp. 1-32

-, 'The Piraeus 1902 hoard of plated drachms and tetradrachms (*IGCH* 64)' in *Χαρακτήρ, αφιέρωμα στη Μάντω Οικονομίδου*, Athens, 1998 pp. 139-146

-, and N.M.Waggoner, 'Dating the earliest coins of Athens, Corinth and Aegina', *AJA* 88 (1964) pp. 325-340

A.Kuhrt, 'Achaemenid Babylonia: sources and problems' in *Achaemenid History IV* pp. 177-194

- L.Kurke, *The Traffic in Praise. Pindar and the Poetics of Social Economy*, Ithaca, Cornell, 1991
- , *Coins, Bodies, Games and Gold. The Politics of Meaning in Archaic Greece*, Princeton, 1999
- M.Lang, 'A new inscription from Thasos. Specifications for a measure', *BCH* (1952) pp. 12-31
- M.Langdon, 'Public auctions in ancient Athens' in R.Osborne, S.Hornblower (eds), *Ritual, Finance, Politics. Athenian Democratic Accounts Presented to D.M.Lewis*, Oxford, 1994 pp. 253-265
- J.A.O.Larsen, *Greek Federal States*, Oxford, 1968
- D.Lateiner, 'A note on the perils of prosperity in Herodotus', *RhM* 125 (1982) pp. 97-101
- J.F.Lazenby, *The Spartan Army*, Warminster, 1985
- , 'The conspiracy of Kinadon reconsidered', *Athenaeum* 85 (1997) pp. 437-447
- R.P.Legon, *Megara. The Political History of a Greek City-state to 336 BC*, Ithaca and London, 1981
- A.Lemaire, 'Remarques à propos du monnayage cicilien d'époque perse et de ses légendes araméennes' *REA* 91 (1989) pp. 141-168
- P.Leveque, 'Philip's personality' in M.B.Hatzopoulos, L.D.Loukopoulos (eds.), *Philip of Macedon*, Athens, 1991 pp. 176-188
- D.Lewis, *Sparta and Persia*, Leiden, 1977
- , 'The last inventories of the treasurers of Athena' in D.Knoepfler (ed), *Comptes et inventaires dans la cité grecque*, Neûchatel, Genève, 1988 pp. 297-308
- , 'Persian gold in Greek international relations', *REA* 91 (1989) pp. 227-235
- , 'Mainland Greece, 479-51' in *CAH V* pp. 96-120

- , 'Oligarchic thinking in the late fifth century.' in R.M.Rosen, J.Farrell (eds), *Nomodeiktes. Greek Studies in Honour of M.Ostwald*, Michigan, 1993 pp. 207-211
- , 'The King's dinner (Polyaenus IV 3.32)' in *Achaemenid History II* pp. 79-87
- , 'The Persepolis fortification texts' in *Achaemenid History IV* pp. 1-6
- T.Linders, *The Treasurers of the Other Gods in Athens and their Functions*, Meisenheim am Glan: Hain, 1975
- , 'Inscriptions and orality', *Symbolae Osloenses* 67 (1992a) pp. 27-40
- , 'The Delian temple accounts: some observations', *O Ath* 19 (1992b) pp. 69-73
- , 'Sacred finances: some observations' in T.Linders, B.Alroth (eds), *Economics of Cult in the Ancient Greek World, Proceedings of the Uppsala Symposium 1990*, *Boreas* 21, 1992c pp. 9-13
- A.B.Lloyd, 'Herodotus on Cambyses: some thoughts on recent work' in *Achaemenid History III* pp. 55-66
- M.Lombardo, 'Oro lidico e oro persiano nelle storie di Erodoto', *REA* 91 (1989) pp. 198-212
- W.T.Loomis, 'The Spartan war fund. IG V 1, 1 and a new fragment', *Historia Einz.* 74 (1992) pp. 7-81
- , *Wages, Welfare Costs and Inflation in Classical Athens*, Michigan, 1998
- N.Loraux, *The Invention of Athens: the Funeral Oration in the Classical City* (tr. A.Sheridan), Cambridge Mass., London, 1986
- C.C.Lorber, *Amphipolis. The Civic Coinage in Silver and Gold*, Los Angeles, 1990
- R.W.Macan, *Herodotus Bks VII-IX*, London, 1908
- B.R.MacDonald, 'The Phanosthenes decree. Taxes and timber in late fifth century Athens', *Hesperia* 50 (1981) pp. 141-146

- , 'The import of Attic pottery to Corinth and the question of trade during the Peloponnesian War', *JHS* 102 (1982) pp. 113-123
- , 'Ἀθηστεία and ληΐζομαι in Thucydides and in *IG I<sup>3</sup>* 41, 67, 75', *AJP* 105 (1984) pp. 77-84
- P. Machinist, 'The first coins of Judaea and Samaria. Numismatics and history in the Achaemenid and early hellenistic periods' in *Achaemenid History VIII* pp. 365-379
- C.W.Macleod, *Collected Essays*, Oxford, 1983
- P.R.McKechnie, S.J.Kern (eds), *Hellenica Oxyrhynchia*, 1988
- I.Malkin, *Religion and Colonisation in Ancient Greece*, Leiden, 1987
- G.Manganaro, 'Darici in Sicilia e le emissioni auree delle poleis siceliote e carthagine nel V-III sec. A.C', *REA* 91 (1989) pp. 299-315
- N.Marinatos, *Thucydides and Religion*, Königstein/Ts:Hain, 1981
- T.R.Martin, *Sovereignty and Coinage in Ancient Greece*, Princeton, 1985
- , 'Coins, mints and the polis' in M.H.Hansen (ed), *Sources for the Ancient Greek City-state*, Copenhagen, 1995 pp. 257-291
- H.B.Mattingly, 'The mysterious 3,000 Talents of the first Kallias decrees', *GRBS* 16 (1975) pp. 15-22
- , 'Coins and amphoras-Chios, Samos and Thasos in the fifth century BC', *JHS* 101 (1981) pp. 78-86
- , *The Athenian Empire Restored. Epigraphic and Historical Studies*, Michigan, 1996
- J.M.F.May, (C.M.Kraay and J.K.Jenkins (eds)), *The Coinage of Abdera (540-345 BC)*, London, 1966
- A.Meadows and K.Shimpton (eds), *Money and its Uses in the Ancient Greek World*, Oxford, 2001
- R.Meiggs, *The Athenian Empire*, Oxford, 1972



- J.R.Melville Jones, 'The value of electrum in Greece and Asia' in R.J.H.Ashton, S.Hurter (eds), *Studies in Greek Numismatics in Memory of M.J.Price*, London, 1988 pp. 259-268
- B.D.Meritt, *Documents on Athenian Tribute*, Cambridge Mass., 1937
- L.Migeotte, *Les souscriptions publiques dans les cités grecques*, Genève, Québec, 1992
- , *L'emprunt public dans les cités grecques. Recueil des documents et analyse critique*, Québec, Paris, 1984
- M.C.J.Miller, 'The Macedonian pretender Pausanias and his coinage', *Ancient World* 13 (1986) pp. 23-27
- J.G.Milne, 'The currency of Arcadia', *NC* 9 (1949) pp. 83-92
- L.G.Mitchell, *Greeks Bearing Gifts. The Public Use of Private Relationships in the Greek World, 435-323 BC*, Cambridge, 1997
- J.H.Molyneux, *Simonides, a Historical Study*, Wauconda, Illinois, 1992
- A.Momigliano, 'Sea-power in Greek thought', *CR* 58 (1944) pp. 1-7
- H.Montgomery, 'Silver, coins and the wealth of a city-state', *Opuscula Atheniensia* 15 (1984) pp. 123-133
- , 'Merchants fond of corn. Citizens and foreigners in the Athenian grain trade' *Symb.Oslo* 61 (1986) pp. 43-61
- J.Moreau, 'Aristote et la monnaie', *REG* 82 (1969) pp. 349-364
- C.Morgan, 'Ethnicity in early Greek states. Historical and material perspectives', *PCPhS* 37 (1991) pp. 131-163
- J.S.Morrison, R.T.Williams, *Greek Oared Ships 900-322BC*, Cambridge, 1968
- , and J.F.Coats, *The Athenian Trireme*, Cambridge, 1986

- R.A.Moysey, 'Observations on the numismatic evidence relating to the great satrapal revolt of 362/1 BC', *REA* 91 (1989) pp. 107-139
- O.Murray, 'Ἀρχαῖος δασμός', *Historia* 15 (1966) pp. 142-156
- J.L.Myres, *Herodotus. Father of History*, Oxford, 1953
- M.G.Nenci, 'Economie et société chez Hérodote' in *Actes du IXe Congrès de Rome*, 1973 pp. 133-146
- H.Nicolet-Pierre, 'Epigraphie et numismatique. Quelques remarques sur les noms de monnaies dans des inscriptions grecques archaïques' in K.A.Sheedy, Ch.Papageorgiadou-Banis (eds), *Numismatic Archaeology, Archaeological Numismatics*, Oxford, 1997 pp. 70-76
- , 'Or Perse en Grèce: deux trésors de dariques conservés à Athènes' in *Χαρακτήρ, αφιέρωμα στη Μάντω Οικονομίδου*, Athens, 1996 pp. 200-208
- T.H.Nielsen, 'Was there an Arcadian confederacy in the fifth century BC?' in N.H.Hansen, K.Raaflaub (eds), *More Studies in the Ancient Greek Polis*, *Historia Einz.* 108, 1996a pp. 39-61
- , 'A survey of dependent *poleis* in classical Arcadia' in N.H.Hansen, K.Raaflaub (eds) *More Studies in the Ancient Greek Polis*, *Historia Einz.* 108, 1996b pp. 63-105
- , *et alii*, 'Athenian grave monuments and social class', *GRBS* 30 (1989) pp. 411-420
- S.P.Noë, 'Two hoards of Persian sigloi', *NNM* 136 (1956) pp. 1-44
- T.S.Noonan, 'The grain trade of the northern Black Sea in antiquity', *AJP* 94 (1973) pp. 231-242
- J.Ober, *Mass and Elite in Democratic Athens*, Princeton, 1989
- , 'Thucydides, Pericles and the strategy of defense' in J.W.Eadie, J.Ober (eds), *The Craft of the Ancient Historian: Essays in Honour of Chester W. Starr*, Lanham, New York, London, 1985 pp. 171-188

- S.Oikonomides, 'Προαρχαϊκή Ελλάδα και όνειρα. Ονειρικός λήθαργος – Ψυχική εγρήγορση – Πολιτική αφύπνιση', *Τέχνες και Αρχαιολογία* 78 (2001) pp. 31-35
- P.Oliva, *Sparta and her Social Problems*, Amsterdam, Prague, 1971
- S.I.Oost, 'Thucydides and the irrational: sundry passages' *CP* 70 (1975) pp. 186-196
- A.L.Oppenheim, 'The Babylonian evidence of Achaemenid rule in Mesopotamia' in *CHI II* pp. 529-587
- R.Osborne, *Classical Landscape with Figures*, London 1987
- , 'Social and economic implications of the leasing of land and property in classical and hellenistic Greece', *Chiron* 18 (1988) pp. 225-70
- , *Greece in the Making 1200-479 BC*, Oxford, 1996
- , *Archaic and Classical Art*, Oxford, New York, 1998
- M.Ostwald, 'The Athenian legislation against tyranny and subversion', *TAPA* 86 (1955) pp. 103-128
- A.Panagiotou, 'Γλωσσικές παρατηρήσεις σε Μακεδονικές επιγραφές' in *Ancient Macedonia IV* pp. 413-29
- A.Panagopoulos, *Captives and Hostages in the Peloponnesian War*, Amsterdam, 1989
- C.Papageorgiadou-Banis, *The Coinage of Kea, Meletemata* 24, Athens, 1997
- D.Papakonstantinou-Diamantourou, 'Μετάλλινα αντικείμενα από την Πέλλα Ζ. Ιππικά όργανα' in *Μνείας χάριν, Τόμος στη μνήμη Μαίρης Σιγανίδου*, Thessaloniki, 1998 pp. 189-196
- R.Parker, *Miasma. Pollution and Purification in Early Greek Religion*, Oxford, 1983
- , 'Greek states and Greek oracles' in P.Cartledge and F.D.Harvey (eds), *Crux. Essays Presented to G.E.M. de Ste Croix, on his 75th Birthday*, London, 1985 pp. 298-326
- , *Athenian Religion. A History*, Oxford, 1996

- J.Pečirka, 'The crisis of the Athenian *polis* in the fourth century BC, *Eirene* 14 (1976) pp. 5-29
- C.B.R.Pelling, 'Thucydides' Archidamus and Herodotus' Artabanus' in M.A.Flower and M.Toher (eds), *Georgica. Greek Studies in Honour of G.Cawkwell, BICS Suppl.* 58 (1991) pp. 120-142
- P.Pearlman, 'The first seven hundred years. Part II', in T.H.Nielsen (ed), *Even More Studies in the Ancient Greek Polis, Historia Einz.* 162 (2002) pp. 187-227
- S.Pearlman, 'The causes and the outbreak of the Corinthian war', *CQ* 14 (1964) pp. 64-81
- , 'Panhellenism, the *polis* and imperialism', *Historia* 25 (1976a) pp. 1-30
- I.N.Persinakes, *Η Έννοια του πλούτου στην Ιστορία του Ηροδότου*, Ioannina, 1987
- U.Peter, *Die Münzen der thrakischen Dynasten (5-3j.v.Chr)*, 1997
- O.Picard, 'Numismatique et iconographie: le cavalier macédonien' in *Iconographie classique et identités régionales, BCH Suppl.* 14 (1986) pp. 67-75
- , 'Deux émissions de bronzes d'Amphipolis', *BCH* 118 (1994) pp. 207-214
- , 'Το νόμισμα στο Μακεδονικό χώρο' in *Το νόμισμα στο Μακεδονικό χώρο, Οβολός* 4, Thessaloniki, 2000 pp. 15-23
- Plutarch *The Malice of Herodotus* (with an Introduction, a Translation and Commentary by A.J.Bowen), London, 1992
- A.J.Podlecki, *Pericles and his Circle*, London-New York, 1998
- J.Pouilloux, *Recherches sur l'histoire et les cultes de Thasos*, Paris, 1954
- , *Choix d'inscriptions grecques*, Paris, 1960
- B.Poulios, 'Τα νομίσματα της Μακεδονίας από τον 6<sup>ο</sup> αι. π.Χ. έως το 148 π.Χ.' in *Ancient Macedonia* pp. 53-60
- B.B.Powell, *Homer and the Origin of the Greek Alphabet*, Cambridge, 1991

- C.A.Powell, 'Religion and the Sicilian expedition', *Historia* 28 (1979) pp. 15-31
- J.Price, *Thucydides and Internal War*, Cambridge, 2001
- M.J.Price, 'Early Greek bronze coinage', in C.M.Kraay-G.K.Jenkins (eds), *Essays in Greek Coinage Presented to E.S.G Robinson*, 1968 pp. 90-104
- , *Coins of the Macedonians*, London, 1974
- , 'The coinage of Philip II, *NC* 19 (1979) pp. 230-241
- , 'Croesus or pseudo-Croesus? Hoard or hoax? Problems concerning the sigloi and double sigloi of the Croeseid type' in A.Houghton, S.Hurter, P.E.Mottahedeh, J.Scott (eds), *Festschrift für Leo Mildenberg*, Wetteren, 1984 pp. 211-222
- , and N.Waggoner, *Archaic Greek Coinage. The Asyut Hoard*, London, 1975
- W.K.Pritchett, 'Fourth Century Athenian sales taxes', *CP* 50 (1956a) pp. 100-1
- , *The Attic Stelai Part II*, *Hesperia* 25 (1956b) pp. 178-317
- , *The Choiseul Marble*, Berkeley and Los Angeles, 1970
- , *The Greek State at War*, Part I, Berkeley, Los Angeles, London, 1971
- , 'Loans of Athena in 407 BC', *Anc.Soc.* 8 (1977) pp. 35-47
- , *The Greek State at War*, Part IV, Berkeley, Los Angeles, London, 1985
- , *The Greek State at War*, Part V, Berkeley, Los Angeles, Oxford, 1991
- G.Proietti, *Xenophon's Sparta*, *Mnemosyne* Suppl. 98 (1987)
- F.Prost, 'Les combattants de Marathon: idéologie et société hoplitiques à Athènes au Ve s.' in F.Prost (ed), *Armées et société de la Grèce classique, Aspects sociaux et politiques de la guerre aux Ve et IVe s. av. J-C*, 1999 pp. 69-88
- S.Psoma, 'Σταθμητικοί κανόνες στη Χαλκιδική κατά τον 5<sup>ο</sup> και 4<sup>ο</sup> αι. π.Χ. in *Το νόμισμα στο Μακεδονικό χώρο*, *Οβολός* 4, Thessaloniki, 2000 pp. 25-36
- K.A.Raaflaub, 'Herodotus, political thought, and the meaning of history', *Arethusa* 20 (1987) pp. 221-248

- A.E.Raubitschek, 'Herodotus and the inscriptions', *BICS* 8 (1961) pp. 59-61
- O.Ravel, 'The "colts" of Ambracia', *ANSNM* 37 (1928) pp. 1-180
- E.J.P.Raven, 'Problems of the earliest owls of Athens' in C.M.Kraay-G.K.Jenkins (eds), *Essays in Greek Coinage Presented to E.S.G. Robinson*, Oxford, 1968 pp. 40-58
- , 'The amphictionic coinage of Delphi, 336-334' *NC* (6<sup>th</sup> ser.) 10 (1950) pp. 1-22
- D.Raymond, *Macedonian Regal Coinage to 413 BC*, *ANSNM* 126 (1953)
- S. von Reden, 'Money, law and exchange: coinage in the Greek polis', *JHS* 117 (1997) pp. 154-176
- G.M.A.Richter, 'The late 'Achemenian' or 'Greco-Persian' gems', *Hesperia* Suppl. 8 (1949) pp. 291-189
- P.J.Rhodes, *Commentary on the Aristoteleian Athenaion Politeia*, Oxford, 1981
- , *Thucydides' History II*, London, 1988
- , *The Athenian Empire*, *G&R* 17 (1993)
- , with R.Osborne, *Greek Historical Inscriptions 404-323 BC*, Oxford, 2003
- G.Le Rider, 'Les monnaies thasiennes' in *Guide de Thasos* (1967)
- , 'The coinage of Philip and the Pangaion mines' in M.B.Hatzopoulos, L.D.Loukopoulos (eds), *Philip of Macedon*, Athens, 1991 pp. 48-57
- , *Monnayage et finances de Philippe II. Un état de la question*, *Meletemata* 23, Athens, 1996
- , and K.Jenkins, N.Waggoner, U.Westermark (eds), *Kraay-Mørholm Essays. Numismatic Studies in Memory of C.M.Kraay and O.Mørholm*, Louvain-la-Neuve, 1989
- T.E.Rihll, 'Making money in classical Athens' in D.J.Mattingly, J.Salmon (eds), *Economies beyond Agriculture in the Classical World*, London-New York, 2000 pp. 115-142

D.M.Robinson, *Excavations at Olynthus. Part VI: the Coins found at Olynthus in 1931*, Baltimore, 1933

-, and M.J.Price, 'An emergency coinage of Timotheus', *NC* 7 (1967) pp. 1-6

E.S.G.Robinson, 'The Athenian currency decree and the coinages of the allies', *Hesperia* Suppl. 8 (1949) pp. 324-340

-, 'A hoard of archaic Greek coins from Anatolia', *NC* (7<sup>th</sup> ser.) 6 (1961) pp. 107-117

-, 'Some problems in the later fifth century coinage of Athens', *ANSMN* 9 (1960) pp. 1-15

-, 'The beginnings of Achaemenid coinage', *NC* (6<sup>th</sup> ser.) 18 (1958) pp. 187-193

-, "The coins from the Ephesian Artemision reconsidered" *JHS* LXXI (1951) pp. 156-167

J. de Romilly, *The Rise and Fall of States according to Greek Authors*, Michigan, 1977

-, *Thucydides and Athenian Imperialism* (tr. P.Thody), Oxford, 1963

T.Rood, *Thucydides: Narrative and Explanation*, Oxford, 1998

M.C.Root, 'The Persian archer at Persepolis: aspects of chronology, style and symbolism', *REA* 91 (1989) pp. 33-50

-, 'Evidence from Persepolis for the dating of Persian and archaic Greek coinage', *NC* 148 (1988) pp. 1-12

J.Roy, 'Polis and tribe in classical Arcadia' in M.H.Hansen, K.Raaflaub (eds), *More Studies in the Ancient Greek Polis*, *Historia Einz.* 108 (1996) pp. 107-112

K.Rutter, 'Athens and the western Greeks in the fifth century BC: the numismatic evidence' in G. Le Rider, K.Jenkins, N.Waggoner, U.Westermark (eds), *Kraay-Mørkholm Essays. Numismatic Studies in Memory of C.M.Kraay and O.Mørkholm*, Louvain-la-Neuve, 1989 pp. 245-257

- M.Sahlins, *Apologies to Thucydides. Understanding History as Culture and Vice Versa*, Chicago, London, 2004
- S.Said, 'Herodotus and tragedy' in A.J.Bakker, I.J.F de Jong, H. van Wees (eds), *Brill's Companion to Herodotus*, Leiden, Boston, Köln (2002) pp. 115-145
- J-F.Salles, 'Du Blé, de l'huile et du vin (notes sur les échanges commerciaux Méditerranée orientale vers le milieu du 1er millénaire avant J-C)' in *Achaemenid History VIII* pp. 191-215
- J.B.Salmon, *Wealthy Corinth, a History of the City to 338 BC*, Oxford, 1984
- , 'The economic role of the Greek city', *G&R* 46 (1999) pp. 147-167
- L.J.Samons II, 'Athenian finance and the treasury of Athena', *Historia* 42 (1993) pp. 129-138
- , *Empire of the Owl. Athenian Imperial Finance*, *Historia Einz.* 142 (2000)
- H.Sancisi-Weerdenburg, 'The fifth century oriental monarchy and hellenocentrism: *Cyropaedia VII* and its influence' in *Achaemenid History II* pp. 117-131
- , 'Was there ever a Median empire?' in *Achaemenid History III* pp.196-212
- , 'The orality of Herodotus' *Μηδικός Λόγος* or: the Median empire revisited' in *Achaemenid History VIII* pp. 39-55
- H.Schneider, 'The dimensions of the historical and cultural core of a European identity' in T.Jansen (ed.), *Reflections on European Identity* (European Commission, Forward Studies Unit, 1999) pp. 1-15
- E.Schönert-Geiss, *Griechisches Münzwerk, die Münzprägung von Bisanthe-Dikaia-Selymbria*, Berlin, 1975



- L.Scott, 'Were there *polis* navies in archaic Greece?' in G.J.Oliver et al. (eds), *The Sea in Antiquity*, *BAR International Series* 899, 2000 pp. 93-115
- R.Seaford, *Money and the Early Greek Mind. Homer, Philosophy, Tragedy*, Cambridge, 2004
- K.M.W.Shimpton, 'The private banks in fourth century BC Athens: a reappraisal', *CQ* 47 (1997) pp. 396-422
- R.Seager, 'Lysias against the corn dealers', *Historia* 15 (1966) p. 172-184
- R.Sealey, *Essays in Greek Politics*, New York, 1965
- C.T.Seltman, *Greek Coins* (2<sup>nd</sup> ed.), 1955
- , *Athens. Its History and Coinage before the Persian Invasion*, Cambridge, 1924
- , *The Temples Coins of Olympia*, Cambridge, 1921
- J.M.Servet, *Nomismata. État et origines de la monnaie*, Lyon, 1984
- T.L.Shear, 'The Tholos', *Hesperia* 4 (1935) pp. 343
- K.A.Sheedy, 'Late archaic hoards in the Cyclades and some thoughts on a regional pattern of trade' in K.A.Sheedy, Ch.Papageorgiadou-Banis (eds), *Numismatic Archaeology and Archaeological Numismatics*, Oxford, 1987 pp. 107-117
- B.Shimron, 'Politics and belief in Herodotus', *Historia Einz.* 58 (1989)
- G.Shipley, 'Introduction: the limits of war' in J.Rich, G.Shipley (eds.), *War and Society in the Greek World*, London and New York, 1993 pp. 1-24
- D.N.Smith, *Herodotus and the Archaeology of Asia Minor: a Historiographic Study*, 1987
- R.E.Smith, 'Lysander and the Spartan empire', *CP* 43 (1948) pp. 145-156
- S.B.Smith, 'The economic motive in Thucydides', *HSCPh* LI (1940) pp. 267-301
- A.M.Snodgrass, 'The hoplite reform and history', *JHS* 85 (1965) pp. 110-122

- C.Sourvinou-Inwood, 'What is *polis* religion?' in O.Murray and S.Price (eds), *The Greek City. From Homer to Alexander*, Oxford, 1990 pp. 295-322
- P. de Souza, *Piracy in the Graeco-Roman World*, Cambridge, 1999
- J.Spier, 'Lycian coins in the 'Decadrachm Hoard' in I.Carradice (ed), *Coinage and Administration in the Athenian and Persian Empires. The 9<sup>th</sup> Oxford Symposium on Coinage and Monetary Economy*, BAR International Series 343, 1987 pp. 29-41
- C.G.Starr, *Athenian Coinage 480-449 BC*, Oxford, 1970
- G.E.M. de Ste Croix, 'Demosthenes' Τίμημα and the Athenian *eisphora* in the fourth century BC', *Clas. & Med.* 14 (1953) pp. 30-70
- , 'The character of the Athenian empire', *Historia* 3 (1954) pp. 1-41
- , 'The estate of Phainippos' in E.Badian (ed), *Ancient Society and Institutions: Studies Presented to V.Ehrenberg on his 75<sup>th</sup> Birthday*, Oxford, (1966) pp. 109-114
- , *The Origins of the Peloponnesian War*, Ithaca, New York, 1972
- R.B.Stevenson, 'Lies and invention in Deinon's *Persica*' in *Achaemenid History II* pp. 27-35
- M.W.Stolper, 'The Kasr archive' in *Achaemenid History IV* pp. 195-205
- J.N.Strassmeier, *Inschriften von Cambyses, König von Babylon*, Leipzig, 1890
- R.S.Stroud, *The Athenian Grain-tax Law of 374/3 BC*, *Hesperia* Suppl. 29 (1988)
- C.H.V.Sutherland, 'Corn and coin. A note on Greek commercial monopolies', *AJP* 64 (1943) pp. 129-147
- J.Svoronos, *L'hellénisme primitif de la Macedonie*, Paris, 1919
- M.Tačeva, 'On the problems of the coinages of Alexander I, Sparadokos and the so-called Thracian-Macedonian tribes', *Historia* 41 (1992) pp. 58-74
- R.J.A.Talbert, 'Corinthian silver coinage and the Sicilian economy, ca. 340 to ca. 290 BC', *NC* (1971) pp. 53-66

- J.Theodorou, 'Athenian silver coins: 6<sup>th</sup> -3<sup>rd</sup> c. BC: the current interpretation' in *Μνήμη Martin Jessop Price*, Athens, 1996 pp. 51-81
- M.C.Taylor, 'Implicating the demos: a reading of Thucydides on the rise of the Four Hundred', *JHS* 122 (2002) pp. 91-108
- X.Thomaides, 'Ο θεσμός του ιατρικού στην ελληνική αρχαιότητα' in *Πρακτικά του Η' Διεθνούς Συνεδρίου Ελληνικής και Λατινικής Επιγραφικής*, Αθήνα 3-9 Οκτωβρίου 1982, Τομ. Β, Athens, 1987 p. 273-277
- R.Thomas, *Oral Tradition and Written Record in Classical Athens*, Cambridge, 1989  
 -, *Literacy and Orality* (CUP 1992)  
 -, *Herodotus in Context. Ethnography, Science and the Art of Persuasion*, Cambridge, 2000
- D.B.Thompson, 'The golden Nikai reconsidered', *Hesperia* 13 (1944) pp. 173-209
- H.A.Thompson, 'The Tholos of Athens and its predecessors', *Hesperia* Suppl. 4 (1940) p. 141
- W.E.Thompson, 'Gold and silver ratios at Athens during the fifth century', *NC* 4 (1964) pp. 103-123
- , 'The functions of the emergency coinages of the Peloponnesian War' *Mnemosyne* (ser.4) 19 (1966) pp. 337-343
- , 'Notes on the treasurers of Athena', *Hesperia* 39 (1970) pp. 54-67
- , 'The Chian coinage in Thucydides and Xenophon', *NC* ser. 7 11 (1971) pp. 323-324
- R.Thomsen, *Eisphora. A Study of Direct Taxation in Ancient Athens*, Copenhagen, 1964
- J.A.Thorne, 'Warfare and agriculture: the economic impact of devastation in classical Greece', *GRBS* 42 (2001) pp. 225-253

- J.Trevett, 'Coinage and democracy at Athens' in A.Meadows, K.Shimpton (eds), *Money and its Uses in the Ancient Greek World*, 2001 pp. 23-34
- C.Tuplin, 'Persian garrisons in Xenophon and other sources' in *Achaemenid History III* pp. 67-70
- , 'Persian décor in *Cyropaedia*: some observations' in *Achaemenid History V* pp. 17-30
- , 'Modern and ancient travellers in the Achaemenid Empire: Byron's road to Oxiana and Xenophon's *Anabasis*' in *Achaemenid History VII* pp. 37-57
- , 'Persians as Medes' in *Achaemenid History VIII* pp. 235-256
- , 'The seasonal migration of Achaemenid kings: a report on old and new evidence' in *Achaemenid History XI* pp. 63-114
- , 'The coinage of Aryandes', *REA* 91 (1989) pp. 61-83
- R.K.Unz, 'The surplus of the Athenian *phoros*', *GRBS* 26 (1985) pp. 21-42
- V.Vasilopoulos, 'Τα αττικά τετράδραχμα σταθμία' in *Χαρακτήρ, αφιέρωμα στη Μάντω Οικονομίδου*, Athens, 1996 pp. 41-47
- J.Velissaropoulos, *Les nauklères grecs*, Genève, Paris, 1986
- V.Velkov-L.Domaradzka, 'Kotys I (383/2-359 av.J-C) et l'emporion Pistiros de Thrace', *BCH* 118 (1994) pp. 1-15
- M. Vickers, 'Early Greek coinage, a reassessment', *NC* 145 (1985) pp. 1-44
- , 'Persian gold in the Parthenon inventories', *REA* 91 (1989) pp. 249-257
- , 'Fifth century chronology and the Coinage Decree', *JHS* 116 (1996) pp. 171-174
- H.T.Wade-Gery, B.D.Meritt, 'Athenian resources in 449 and 431 BC', *Hesperia* 26 (1957) pp. 163-197
- F.W.Walbank, 'The problem of Greek nationality', *Phoenix* 5 (1951) pp. 41ff. = *Selected Papers* (1985) pp. 1-19

- M.B.Walbank, *Athenian Proxenes of the Fifth Century BC*, Toronto and Sarasota, 1978
- , 'The confiscation and sale by the poletai in 402/1 of the property of the Thirty tyrants', *Hesperia* 51 (1982) pp. 74-98
- , 'Leases of sacred properties in Attica. Part I, *Hesperia* 52 (1983) pp. 100-135
- R.W.Wallace, 'The origin of electrum coinage', *AJA* 91 (1985) pp. 385-397
- W.P.Wallace, 'Kleomenes, Marathon, the helots, and Arcadia', *JHS* LXXIV (1954) pp. 32-35
- , 'The Euboian league and its coinage', *ANSNM* 34 (1956) 1-180
- , 'The early coinages of Athens and Euboea', *NC* (7th ser.), 2 (1968) pp. 23-42
- H.T.Wallinga, 'The ancient Persian navy and its predecessors' in *Achaemenid History I* pp. 47-78
- J.A.W.Warren, 'The trihemidrachms of Corinth' in C.M.Kraay, G.K.Jenkins (eds), *Essays in Greek Coinage Presented to E.S.G Robinson*, Oxford, 1968 pp. 125-144
- , 'The autonomous bronze coinage of Sikyon', *NC* 143 (1983) pp. 23-56
- U.Wartenberg, *After Marathon. War, Society and Money in Fifth-Century Greece*, London, 1995
- F.M.Wassermann, 'Post-Periclean democracy in action: the Mytilenean debate (Thuc. III 37-48), *TAPA* 87 (1956) pp. 27-41
- H.van Wees, 'The Homeric way of war. The *Iliad* and the hoplite phalanx' (I) and (II), *G&R* 41 (1994) pp. 1-18, 131-155
- , 'Politics and the battlefield. Ideology in Greek warfare' in A.Powell (ed.), *The Greek World*, London and New York, 1995 pp. 153-178
- , 'Herodotus and the past' in E.J.Bakker, I.J.F. de Jong, H. van Wees (eds), *Brill's Companion to Herodotus*, Leiden, Boston, Köln, 2002 pp. 322-349

- , *Greek Warfare. Myths and Reality*, London, 2004
- , 'Warfare and Society' in P.Sabin et al. (eds), *The Cambridge History of Greek and Roman Warfare*, Cambridge (forthcoming)
- U.Westermark, 'Remarks on the regal Macedonian coinage ca. 413-359 BC' in G.Le Rider, K.Jenkins, N.Waggoner, U.Westermark (eds), *Kraay-Mørkholm, Essays: Numismatic Studies in Memory of C.M.Kraay and O.Mørkholm*, Louvain-la-Neuve, 1989 pp. 301-315
- , 'The staters of Archelaus. A die-study' in M.J.Price, A.Burnett, R.Bland (eds), *Essays in Honour of Robert Carson and Kenneth Jenkins*, London, 1993 pp. 17-30
- H.D.Westlake, *Essays on the Greek Historians and Greek History*, Manchester, 1969
- A.B.West, 'Fifth and fourth century gold coins from the Thracian coast', *NNM* 40 (1929)
- S.West, 'Herodotus' epigraphical interests', *CQ* 35 (1985) pp. 278-305
- D.Whitehead, *The Demes of Attica, 508/7-ca.250 B.C.*, Princeton, 1986
- , 'Ο νέος δασμός': "tribute" in classical Athens', *Hermes* 126 (1998) pp. 173-188
- C.Williams, J.Fisher, 'Corinth 1970, Forum Area', *Hesperia* XL (1971)
- R.T.Williams, 'The confederate coinage of the Arcadians in the 5<sup>th</sup> c. BC', *ANSNM* 155 (1965) pp. 1-140
- , *The Silver Coinage of the Phokians*, London, 1972
- A.M.Woodward, 'Two Attic treasure-records' in *Athenian Studies Presented to W.S.Ferguson*, *HSCP* Suppl. 1 (1946) pp. 377-407
- , 'Financial documents from the Athenian Agora', *Hesperia* 32 (1963) pp. 144-186
- W.F.Wyatt, 'Persian dead at Marathon', *Historia* 25 (1976) pp. 483-484
- J.Youroukova, *Coins of the Ancient Thracians* (tr. V.Athanassov), *BAR* 4, 1976

-, 'Nouvelles observations sur le monnayage tribal Thrace', *Pulpuđeva* 4 (1983) pp.  
27-38

J.Zahle, 'Politics and economy in Lycia during the Persian period', *REA* 91 (1989) pp.  
169-182